

SPECIAL PAPERS IN INTERNATIONAL ECONOMICS

No. 4, APRIL 1963

INTERNATIONAL
MONETARY
PROBLEMS
AND THE
FOREIGN
EXCHANGES

EGON SOHMEN

INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS

PRINCETON UNIVERSITY • 1963

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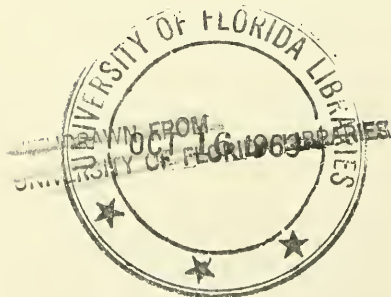
This is the fourth number in the series SPECIAL PAPERS IN INTERNATIONAL ECONOMICS.

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FRITZ MACHLUP, *Director*
International Finance Section



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FOREWORD

Balance-of-payments crises and the distortions of world trade and payments they cause are but one of the many unresolved economic problems of our time. There are others—the bitter antagonism between two powerful blocs espousing radically different principles of economic organization, or the rather unsatisfactory progress of the less developed regions of the globe—that may well be even more important. I have the impression, however, that there is no other economic issue of comparable weight for which reasonable solutions can be put into effect as easily as for the problems of international finance.


This booklet is addressed primarily to the economically sophisticated reader without special training in the area of international trade theory and policy. It may also serve as an introduction to my recent book, *Flexible Exchange Rates* (Chicago: University of Chicago Press, 1961) in which related topics are treated on a substantially more advanced theoretical plane. It was generally felt, I believe, that this latter publication was perhaps written in a somewhat too terse and difficult manner, given the fact that it also dealt with issues of rather topical interest to policymakers who do not always have the leisure to ponder abstract theoretical reasoning. I therefore welcome the opportunity to publish this companion volume.

The arrangement of the material may require some explanation. The opening chapter is a rather extensive introduction to some of the current problems of the real world. The systematic exposition of the theoretical groundwork begins with Chapter II. This may appear as a reversal of the logical order of treatment. The reasons for adopting it were frankly psychological: it has been my experience that many readers outside a small circle of theoretically oriented economists want to see for what purposes theoretical analysis is to be used before they are willing to invest time in it. Readers who are not so inclined may just as well start with Chapter II and read the introductory first chapter at the very end. Literature references in the text are kept to a minimum; instead, I have appended an annotated bibliography.

Many economists appear to believe that members of our profession ought never to offer clear and unambiguous policy advice. Those who are thus inclined will not, I am afraid, be likely to derive comfort from the following pages.

For help and advice, I want to thank Professors Herbert Giersch and my assistant, Mr. Rolf Bollinger.

E.S.



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I. Problems, Policies and Panaceas

1. Definitions

An exchange rate is the price of one national currency in terms of another. The usual practice is to quote it as the price of one unit of foreign currency in terms of domestic currency. In the United States, e.g., an exchange rate of 2.80 for the pound sterling means that one pound can be purchased for \$2.80. Only the United Kingdom deviates from this general practice and quotes exchange rates as the amounts of foreign currency obtainable for one pound.

For clarity, we shall avoid the ambiguous expressions "rise" and "fall" of an exchange rate. Instead, we shall always explicitly indicate whether an appreciation or a depreciation of a specific currency has occurred. By the former, we mean that its price in terms of other currencies has risen; by the latter, that it has fallen.

A closely related concept is that of "par value" or "parity" of a currency. Article IV of the *Articles of Agreement* of the International Monetary Fund stipulates that "the par value of the currency of each member shall be expressed in terms of gold as a common denominator or in terms of the United States dollar of the weight and fineness in effect on July 1, 1944" (the date on which the *Articles of Agreement* were decided upon at Bretton Woods, N.H.). The price of gold at that time was (and still is) \$35 per ounce. Gold is thus made a universal value standard for the currencies of all member countries. For purely practical reasons, par values of currencies are usually stated in terms of their U.S. dollar equivalents.

By fixing their values in terms of a common denominator, the exchange ratio between any pair of currencies is also fixed. The actual exchange rates on any given day do not conform precisely to the ratios of the par values of the two currencies. These ratios serve only as pegs around which exchange rates fluctuate, as determined by the autonomous forces acting on the foreign-exchange markets. Rigid limits are set for such fluctuations, however: according to the *Articles of Agreement*, "rates of exchange . . . shall not differ from parity . . . by more than one per cent" (Art. IV, sec. 3). In practice, most member countries have fixed the limits at less than one per cent to either side of the par value (usually around 0.75 per cent). At these limits, the central banks or exchange-stabilization funds of the member countries have to intervene through purchases or sales of gold or foreign currencies to prevent wider swings. They often intervene, in fact, at a much earlier stage to keep even short-run oscillations within very narrow limits.

The movement of exchange rates is thus closely controlled today, although they are not rigidly pegged in the sense that foreign currencies could only be bought and sold at one single price. There are also substantial differences between countries in the extent to which central banks intervene on the exchange markets. The decisive characteristic of our present system is, nevertheless, that exchange rates are not allowed to move beyond the narrow bands fixed by the Bretton Woods agreement, *unless* the par value itself is adjusted.¹

Such adjustments are foreseen in the *Articles of Agreement*. They are to be undertaken by administrative decision, after consultation with the International Monetary Fund and its formal approval, in the event of a "fundamental disequilibrium." The *Articles of Agreement* provide no explanation of the exact meaning of this term, and a little reflection will convince anybody that it is impossible to give one. The borderline between a temporary disturbance and an irreparable maladjustment is smooth, not abrupt. When par values were changed in the postwar era, this had necessarily to happen only after long and passionate controversy, after repeated public denials that such a measure was contemplated, and without the careful consideration of the pros and cons in the governing body of the IMF, as foreseen in its charter.

A term we shall frequently use is that of "convertibility." Many years ago, it used to denote a state of affairs in which central banks were committed to redeem banknotes into gold at a fixed price. This type of convertibility no longer exists. In modern terminology, convertibility of a currency means that it can be freely exchanged into foreign currencies. This freedom, a natural by-product of gold-standard convertibility, is today limited in varying degrees in many countries. Restrictions on convertibility are summarized under the heading "exchange controls." They may take the very severe form of a general ban on currency conversion and the obligation to surrender all newly acquired foreign-exchange receipts to the central bank. Every single payment is then subject to the approval of the authorities. A milder form is a general permit for certain specified types of transactions, while others are strictly forbidden or subject to individual approval. All payments for imports of goods may be free (though their importation may itself be subject to import licenses), whereas "capital movements," that is, transfers of funds merely for the purpose of ac-

¹ A few countries no longer adhere to this rule, but have nevertheless not lost their membership in the IMF. The most important outsider used to be Canada, where exchange rates fluctuated freely from 1950 to 1962. It is generally acknowledged that this practice clearly violates the basic principles on which the Bretton Woods agreement is built.

quiring foreign assets (bank deposits, stocks or bonds, etc.), are closely supervised.

Apart from differentiation according to the purpose of payment, it is also possible to differentiate according to the type of person making a transfer. The most important distinction is that between "resident" and "non-resident" convertibility. Most West European countries introduced non-resident convertibility at the end of 1958. This change brought full freedom of disposition over all bank deposits held by non-residents while payments by residents of the country continue to be subject to controls of varying degrees of liberality.

Among other things, this booklet presents a plea for flexible exchange rates, that is, the removal of the rigid boundaries within which the movement of exchange rates is now confined. I suspect that most of the opposition to this proposal is due to semantics rather than to genuine differences of opinion. Superficially, the term "flexible" indeed appears to be the antithesis of "stable" and "durable." The advocacy of flexible rates is therefore often identified with the defeatist abandonment of a solid institution in favor of something weak and undependable.

In linguistics as well as in economics, "flexible" is not synonymous with "unstable." The antithesis of flexibility is not stability, but rigidity. This writer, for one, joins with enthusiasm all those who plead for a high degree of stability of exchange rates. It ought to be remembered throughout this study that there is no disagreement on that score. The dispute centers on the *means* by which the preservation of exchange-rate stability should be attempted. With this reminder, let us dispense at once with the most frequent objection to flexible rates, the contention that they would, as a consequence of greater insecurity of international commercial and financial transactions, lead to a reduction of world trade and payments. Disintegration of the world economy would indeed involve grievous losses, but it is precisely the promotion of *more* international trade that has led this author, among others, to reject the present system of (adjustably) pegged rates.

It is not enough to take a simple once-and-for-all policy decision to determine whether or not exchange rates are to be stable. The long-run equilibrium value of an exchange rate is the resultant of an immeasurably large number of actions by independent decision-makers. A country's monetary and fiscal policies, the variables directly under the control of its central bank and government, play an important part, but so do the price policies of all businesses and the collective-bargaining agreements between them and the trade unions.

In theory, governments also have the means of influencing these

latter factors. Antitrust action checking restraints on competition in the product markets as well as against monopoly power of unions may, among other things, serve to prevent too rapid an increase of prices. We are a considerable distance from a climate of public opinion where truly effective policies against the basic causes of sellers' inflation would be politically feasible. As long as these conditions are not satisfied in a number of leading economies—nobody can claim that they are fulfilled in the United States or the United Kingdom, for example—exchange rates are most unlikely to remain stable over the long run. If a government tries to enforce their stability through fiscal and monetary policies under these conditions, large-scale unemployment will be the consequence unless the authorities are willing to abandon the principle of free convertibility of the national currency into others and to impose restrictions on foreign trade.

Historical evidence shows that neither mass unemployment nor exchange controls and the associated impediments to international trade are popular enough to be feasible propositions over the long run. It is therefore always a safe bet that a country whose economy shows the symptoms of serious currency overvaluation, in particular business stagnation and balance-of-payments difficulties, will eventually devalue its currency. In all probability, to be sure, this will happen after years of solemn denials of any such intention by central bankers and government officials.

Even if a government is able to control all those variables in its home economy that influence domestic prices, and is willing to enforce reasonable stability of the price level, stability of exchange rates for its currency is by no means assured. An exchange rate is a ratio between *two* currencies. Stability of the par value of a given currency does not merely depend on the willingness and ability of its own authorities and citizens to satisfy an embarrassingly large number of conditions, but on an equal willingness and ability on the part of *other* governments.

Most people are satisfied that their own currency has not been devalued as long as the gold price in terms of that currency has not been changed. Unless one sees certain mythical properties in gold, it is clear that any change in the par value of another currency involves a certain measure of exchange-rate adjustment for the domestic currency in the opposite direction. The appreciation of the D-Mark and the Dutch guilder in March 1961, e.g., implied some degree of depreciation of the U.S. dollar. If for no other reason, the affirmation that the dollar will not be devalued is technically incorrect because this decision is not in the hands of the American authorities alone. This is less evident in the case just mentioned merely because the

U.S. economy is a more weighty object than the economies of the two other countries. It should be quite obvious to everybody that the Swiss franc, e.g., has appreciated if the U.S. dollar is devalued. The difference is only one of degree.

An economist easily acquires the reputation of a maverick by too outspoken advocacy of more forceful government policies to promote competition in both the commodity and labor markets. One of the principal reasons for this recommendation, with which the present writer wholeheartedly concurs, among most of its proponents is the role of price stability in preventing disturbances in a country's external accounts. The defense of price stability ought at least to be given credit for the strengthening of exchange-rate stability it implies. It is somewhat inconsistent for people who do not take the goal of price stability very seriously simultaneously to oppose flexibility of exchange rates on the grounds that their stability is too important an objective to be called in question.

The clear distinction between *stability* and *rigidity* on the one hand, *instability* and *flexibility* on the other, is of fundamental importance for all that follows. With the world as it is, long-run stability of exchange rates is, most unfortunately, not a feasible proposition. Wherever governments in countries with strong upward pressure of prices attempt for a few years to keep alive the fiction that it is, millions will have to suffer either from economic stagnation or, less visibly but as certainly, from stringent controls over foreign trade and payments. These surrogates for depreciation have, at least in peacetime, never lasted more than a few years. In view of the damage done by them, we may be grateful for that. The real issue under present conditions is not between stable and unstable exchange rates, but only between smooth and jerky instability over the long run. In more descriptive terms, the choice we have to make, given all the imperfections of the real world, is between (1) free exchange rates with a minimum of restraints on foreign trade and payments at reasonably full employment, on the one hand, and (2) artificially regimented exchange markets, with unemployment ruling in some countries, inflationary booms in others, and occasional hit-or-miss adjustments of currency parities, on the other.

2. Monetary Policy and the Utility of Keynesian Economics

The realization that today's world is not made for permanent stability of par values is usually the principal reason given for the endorsement of flexible exchange rates. Preference for the latter is expressed on the grounds that the smooth adjustment paths along which exchange rates will, under sufficiently alert monetary policies, be led

by the divergent movements of the myriads of monetary, political and technological factors in each country, are preferable to the unforeseeable large jumps characteristic of our present system, with years of maladjustment and stagnation in at least part of the world in between.

The case for flexible exchange rates does not, however, rest on this aspect alone. Its strength is much greater than what is already suggested by comparison with the "adjustable peg." Even *if* conditions in the world were such that the long-run stability of exchange rates would be a feasible proposition, their exposure to free market forces is an incomparably more promising arrangement than their stabilization within narrow margins by direct intervention on the foreign-exchange markets. It can stand repetition that the foremost bone of contention of liberal opponents to the Bretton Woods system is the principle of *artificial* pegging of par values through direct purchases and sales of gold and foreign exchange by central banks or other official bodies. By no means is it the attempt to hold freely fluctuating exchange rates as stable as possible through appropriate measures of fiscal, monetary and general economic policies. Since the subtle, yet fundamental differences between the two approaches to stabilization are so little recognized, the description of adjustment mechanisms under the latter system will be the principal topic of the following chapters. To anticipate the major result of our investigation: *flexibility of exchange rates opens up an entirely new dimension for monetary policy.*

If exchange rates have attained one of the points of intervention by the central bank or stabilization fund, and if currencies are convertible, monetary policy is for all practical purposes rendered impotent under the present system. If, on the other hand, the movement of exchange rates is not hemmed in by rigid limits and the authorities refrain from direct intervention in the foreign-exchange markets, the response of international trade and capital movements in a regime of convertibility will act as a powerful factor *reinforcing* monetary policy. It would undoubtedly prove to be the most important channel through which monetary policy can act as a countercyclical tool. These propositions will be developed in greater detail in later chapters.

As I have emphasized elsewhere, this property of a system of freely fluctuating rates ought to be the principal reason for endorsing it. This property deserves the reader's most serious consideration, for it has so far hardly entered the debate on the pros and cons of alternative international monetary systems. Most opponents of pegged rates have made their case depend on the role of exchange-rate flexibility in ironing out divergent rates of inflation in different countries or on

the possibility of removing foreign-exchange markets from the shackles of authoritarian controls. Even if the present system were able to withstand an unprejudiced examination on these counts, the diametrically opposite effect of monetary policy under pegged and flexible rates alone would be ample reason for rejecting the former.

A deeper analysis of international trade and capital movements has a very important by-product: the revelation that most of what some of us are used to calling "Keynesian" economics is rather irrelevant for the world as we know it today. We cannot enter into a discussion of theoretical details, nor shall we attempt to settle the terminological dispute whether or not one is justified in applying the adjective "Keynesian" to all the ideas and policies that have been developed from Lord Keynes' *General Theory of Employment, Interest and Money* (1933), though their derivation from that work is universally recognized. What matters for our purposes is the fact that in a world of reasonably free trade and payments (1) monetary and fiscal policies are for all practical purposes rendered useless as means of assuring full employment if exchange rates are rigidly pegged, whereas (2) monetary policy alone is amply sufficient to achieve that objective if exchange rates are allowed to fluctuate freely.

During the twenty years following the publication of the *General Theory*, monetary policy was more and more downgraded by economists. Although it has enjoyed a certain recovery in popularity, most economists continue to regard fiscal policy as vastly more potent medicine. The most important reason for this state of affairs is undoubtedly that the role of exchange rates as catalysts for the employment effects of monetary policy has never been adequately recognized. During the era of the gold standard, exchange rates could never move beyond very narrow limits. Lack of familiarity with exchange-rate fluctuations prevented a deeper intellectual interest in them.

In the postwar environment of stringent controls over foreign payments that has persisted until very recently in most countries, the international repercussions of domestic policy were easily forgotten altogether. The currency of the only major country whose residents enjoyed complete freedom of foreign payments, the U.S. dollar, was sufficiently undervalued for so many years, and protected from large-scale capital inflows by exchange controls elsewhere, that its domestic policies were not frustrated by balance-of-payments effects. One consequence was that writers on monetary theory and policy have for the past few decades confined their attention almost exclusively to the domestic effects of central banking. When exchange controls and impediments to international trade can prevent capital flight as well as too serious a deterioration of the current account, the pursuit of

full employment through fiscal and monetary policies can indeed be carried on for some time even at rigid currency parities.

In the early 1960's, the world presents a very different picture. Trade and payments between the leading industrial countries of the Western world have been liberalized to a substantial degree. The U.S. dollar is no longer an undervalued currency; for several years, the United States has had to endure stagnation, with unemployment rising to 7 per cent, to prevent its external accounts from slipping into precarious imbalance. With these profound changes, monetary and fiscal tools of anticyclical policy are no longer effective, although this fact is not yet very widely realized.

3. *The Dilemma of Sellers' Inflation*

Liberation of exchange rates from the straitjacket of rigid pegging, though a badly needed condition for the normal functioning of the world economy, should not be misunderstood to be a panacea that would by itself suffice to solve all the major economic troubles that confront us today. The single most potent objection to flexible rates is undoubtedly the argument that they might encourage undisciplined policies which could prove to be disruptive over the long run. If greater flexibility of exchange rates is seen merely as a means of making an economy immune against the balance-of-payments effects of domestic inflation, this danger is indeed a very real one. It is unfortunate that this interpretation predominates in today's discussion, and that flexibility may eventually be introduced for this reason alone.

Among the two manifestations of currency overvaluation, balance-of-payments disequilibrium and economic stagnation, the latter is undoubtedly much more painfully felt by most people. When sales and employment pick up after an exchange-rate adjustment, it is only natural that the upward pressure of prices (which presumably was the main reason why the currency became overvalued in the first place) becomes even more pronounced. Especially if the rise of prices is not due to excessive demand, but to the exploitation of market power by union and business monopolies (commonly known as "cost-push" or "sellers' inflation"), the movement of exchange rates is likely to be only in one direction. The general realization of this state of affairs may, as long as currencies are freely convertible, lead to capital flight and an even faster rate of depreciation. Such a snowballing crisis may bring the reintroduction of exchange controls and perhaps a general impression that the move toward exchange-rate flexibility alone is to be blamed for the calamity. The progressive rise of domestic prices will perhaps be widely attributed to the depreciation of the currency rather than to the irresponsibility of domestic policies and pressure groups.

This has happened before, during the great German inflation in the early 1920's as well as elsewhere.

Mainly for this reason, I tend to be considerably more cautious in advocating flexible rates as a feasible policy than I am in outlining their superiority on purely logical grounds. Many of the issues involved may be too subtle for the general public whose evaluation, after all, decides the fate of an act of policy in a democracy. Anticipating the possibility of such a deplorable end of any experiment with flexible exchange rates, let me once again clearly state the alternatives for a country in which powerful groups create upward pressure on prices, as long as these forces are not disarmed by sufficiently radical domestic policies. The factors between which some degree of substitution is possible are then

- 1) the state of business activity and employment,
- 2) the degree of freedom of foreign trade and capital movements,
- 3) the degree of stability of exchange rates.

It is entirely possible to keep exchange rates stable under conditions of sellers' inflation, whether they are flexible or pegged, but at the cost of either unemployment or the degree of freedom of external trade and payments, or both. It is possible to preserve reasonably full employment, but only at the cost of giving up currency convertibility or exchange-rate stability. Public recognition of this basic lesson is of the utmost importance. Its moral is perfectly clear: since all three policy targets of full employment, free trade and payments and reasonably stable exchange rates are eminently desirable goals, the forces that are responsible for the incessant upward push on prices will have to be dismantled. It is equally clear, however, that it is politically all but impossible at this stage to put the necessary political machinery into action, for this would, short of comprehensive wage and price controls, involve the reduction or destruction of the monopoly power of many trade unions and business combinations. Too many obstacles stand in the way of really effective action.

In the case of unions, there exists a deep-seated belief that more competitive labor markets would inevitably hurt wage-earners. It is quite obvious, first of all, that higher money wages do not necessarily imply higher real wages unless prices of goods are frozen. In addition, the popular notion involves the error of identifying higher prices *per unit* of labor with higher earnings. Many labor leaders (in the United States, at any rate) do not seem to be aware of the employment effects of wage increases. This oversight is difficult to correct if advocates of management, as many do, try to explain the employment effect by arguing that fewer workers are employed because businesses "cannot

afford" to purchase enough labor if it "becomes too expensive." The really important consequences occur not at the level of the firm hiring labor, but *indirectly* through the rise in commodity prices provoked by a "wage-push." Even in a closed economy, the rise of wages and prices has a depressive monetary effect unless the central bank is prepared sufficiently to expand the money supply (thus adding to the inflationary pressure, of course).²

There are no closed economies in the real world. For open economies with pegged exchange rates, the domestic monetary effect is compounded by the reduction in the volume of exports and the ensuing decline of employment that will inevitably follow a rise in prices. Unlike the domestic effect, it *cannot* be cured by expansionary fiscal policies and a loosening of credit, a fact overlooked by those who used to believe that all the evils of cost-push inflation could be neutralized in this way. The balance-of-payments barrier will quickly doom to failure any such attempt: with currency convertibility at pegged exchange rates, the deterioration of the balance of payments following expansionary policies cannot exceed the limits imposed by the available reserves of gold and foreign exchange. Even though the *trade* balance may not worsen more than could easily be supported by the available reserves for at least a year, capital flight in fear of eventual devaluation may wipe them out within weeks.

I would not expect advocates of labor who are sincerely worried lest a reduction of the bargaining power of unions hurt wage earners to be convinced by theoretical arguments alone. The interests involved are too vital for that.

Among others, the example of West Germany is available to demonstrate the beneficial effects of active competition in both the commodity and labor markets. Until recently, contractual wage rates have for many years been significantly below effective wage rates in virtually all German industries. Wages were thus really determined by the market rather than by collective-bargaining agreements. In the absence of a "cost push," the German economy could forge ahead without being obstructed either by balance-of-payments difficulties or a shortage of effective demand. Partly as a result of this, real wages have been rising faster in West Germany than almost anywhere else. On the other hand, militant bargaining has failed to bring wage earners very impressive or even reasonably satisfactory gains not only in the United States, but also in the United Kingdom: the average annual rates of increase

² Velocity of circulation may conceivably increase in just that proportion that allows for a constant level of employment. It is usually bad policy, however, to rely too heavily on lucky coincidences and near-miracles. Even if these coincidences happen to occur at the right time, full employment is bought only at the cost of accelerated inflation.

of real hourly wage rates in industry from 1953 to 1959 were 2.5 and 3.1 per cent in these two countries against 5.3 per cent in West Germany.³

Some economists deny the validity of the interpretation of recent inflation in the United States, among other countries, as a "sellers' inflation." They point out, quite rightly, that no profit-maximizing monopolist is tempted to leave his optimum position once it is found. He would only reduce his profits by raising prices—unless his monopoly power increases.

Applied to business firms, the denial of the "sellers' inflation" hypothesis takes it for granted that monopoly power does not significantly increase over time. A little reflection shows, however, that there is likely to be a continuous increase of monopoly power unless it is counteracted by determined government policies. It necessarily pays to have more rather than less monopoly power: one can always choose the previous position after an increase, but not vice versa. As long as we follow the basic postulate that entrepreneurs strive to maximize profits, we have to conclude that they will continuously attempt to use more and more restraints of trade and increasing concentration towards that end. Any other behavior would be inconsistent for a rational entrepreneur. If for no other reason, less intense competition is bound to be popular because of the quieter life it promises.

The objections to the hypothesis of sellers' inflation are even less convincing when they are applied to labor. Labor unions are fundamentally different from business firms in that their behavior cannot possibly be rationalized as the attempt to maximize any variable (such as the aggregate income of all members). The motivation of unions cannot be better described than by the story of the union leader who explained that the purpose of unions was to secure fair wages and who, when asked for a definition of the latter, offered the following: "I suppose fair wages are higher wages." The absence of a variable to be maximized implies the absence of a genuine equilibrium situation. There is nothing "irrational" about a union leader trying to battle for *another* wage increase for his union from *whatever* level wages may have reached at the time.

There is usually only a very dim perception of the adverse employ-

³ It is frequently objected that German wages have started from comparatively low levels and have thus had more leeway for increases. According to a recent survey by the statistical office of the European Economic Community, average industrial wages in Germany (including wage supplements) were by 1959 the highest in the Common Market (Service Statistique des Communautés Européennes, *Statistiques Sociales*, No. 3—1961). The gap has widened further since 1959.

This shows that German wages have not merely been "catching up." These findings are all the more notable in view of the fact that wages have traditionally been lower in Germany than in its Western neighbors.

ment effect of a rise in wages and, not infrequently, things are turned upside down: many union officials are quite inclined to see a rise in wages as a means of *stimulating* aggregate demand. The failure of most union leaders to appreciate the depressive tendency of a wage rise is certainly also due to the roundaboutness of the monetary effect which has already been emphasized above. A wage increase that has been realized by a single union usually does not have too great an impact on the aggregate price level. With all other unions pushing ahead, moderation of one in isolation would in practically all cases only make it secure a smaller increase in wages for its own members while the general price level rises just as much. Given the present system of collective bargaining in the United States, a union only stands to lose from self-imposed restraint, even though it may be perfectly clear to its leaders that all of labor is certain to lose if every single union acts in the familiar manner. I cannot imagine that this profound conflict between group interest (or what it is believed to be) and public welfare can be overcome by ever so logical and persistent moral suasion without adequate legislation to make group action and general interest coincide more closely. The most persuasive demonstration that unions are liable to act in a way contrary to the rules of the game of a market economy is provided by the frequent coincidence of unemployment and aggressive bargaining for wage increases in recent years. This phenomenon would be precluded if the wages established by collective bargaining were anywhere near the levels that would prevail under competitive conditions.⁴

If determined policies to assure a satisfactory degree of competition in *both* the commodity and labor markets are indicated by purely economic considerations, simultaneous action in both areas appears to be absolutely inescapable for political reasons as well. There is no question that neither the representatives of management nor those of labor would ever agree to unilateral disarmament of their own side, nor would it be fair to ask them for it.

The urgency of the changes in the international monetary system proposed here is not diminished by the frank recognition that the causes of sellers' inflation and their disastrous effects on the performance of the world economy pose an even greater threat than continued adherence to the principles of Bretton Woods. The very survival of

⁴ An illuminating example of union behavior is the contract secured in January 1962 by the building electricians' union in New York. It provided for a reduction of the working week from 30 to 25 hours and a rise of hourly wages designed to maintain the same weekly income. It was explained that depressed business conditions made a reduction of the work week necessary. At the same time, the contract guaranteed a minimum on five hours overtime per week. Depressed business conditions, here as in other cases, thus served as the *justification* for a substantial increase of hourly wages.

reasonably free, unregimented economies may be at stake if appropriate action in the afflicted countries, above all in the United States, is postponed unduly long.

Serious reservations have been made above as to the practical applicability of a system of flexible exchange rates in a world in which the relevant facts are still so widely misunderstood. The acceleration of events under a regime of flexible rates if inflation in a country is too far out of step with the rest of the world might, on the other hand, perhaps speed up recognition of the trouble and make earlier policy action possible. It is difficult to tell whether we have more reason to be optimists or pessimists, but it certainly could not hurt if the public were told the facts of life more frequently and more courageously.

4. *America's Balance-of-Payments Troubles*

The discussion of possible causes of the recent balance-of-payments deficits of the United States has seen a number of rather dubious arguments to which we shall now turn.

In the eyes of many observers, inflation cannot have been the cause of these difficulties because prices have not been rising faster in the United States than elsewhere. The variables that are usually taken for comparison are cost-of-living indices or comprehensive indices of the movement of prices of all commodities and services making up the Gross National Product. This latter index, for example (the so-called GNP price deflator), shows an increase of 14 per cent for the United States, as compared to 24 per cent for all OEEC countries, from 1953 to 1959. The figure for West Germany, whose balance-of-payments "problem" has been the reverse of that of the United States, was 15 per cent, even a little higher than the American figure.

These aggregate indices are without much significance for the evaluation of a country's competitiveness in the world markets. Most of the items they include are not traded and perhaps hardly tradable internationally (haircuts or streetcar rides, e.g.). If only exportable goods are included, we obtain a totally different picture: a ranking of export price indices of manufactures for all major industrial countries shows the United States leading the inflation parade during the crucial years of the 1950's (Table 1).

The development of the shares of these same countries in total world exports of manufactures, also listed in Table 1, is a striking confirmation of a thoroughly "classical" effect of price changes: the higher the rate of inflation, the greater the decline in the country's share of world exports. The movement of price indices may not even tell the whole story. What matters is not really rates of change, but the actual *levels* of prices. Only if the export prices of all countries had been exactly the

TABLE 1
SELECTED TRADE INDICES FOR MAJOR INDUSTRIAL COUNTRIES

	<i>Per cent Increases of Export Unit Values for Manufactures 1953-1959</i>	<i>Country Shares in the Combined Exports of Manufactures of the Major Industrial Countries (in per cent)</i>	
		1953	1959
United States	15	27	22
United Kingdom	10	22	18
West Germany	5	14	20
Japan	-11	4	7

Source: United Nations, *World Economic Survey*, 1959, Tables 4-28 and 4-31.

same in the base year would there be no difference between the two indicators. A perfunctory examination of steel prices, e.g., shows the United States to be in an even less favorable competitive position than the development of price indices would suggest (Table 2).

For a long time, the most popular version of the American balance-of-payments deficits was that they were due to an excessive outflow of capital, both in the form of private investment and public economic and military assistance. What was required to eliminate the trouble was to reduce America's overseas commitments and to discourage private investment abroad. Real factors, i.e., the development of commercial trade, could not be at fault because the United States had always achieved export surpluses except for a minute deficit in 1959.

It is quite wrong to regard a country's current account (that is, its commercial transactions in goods and services with the rest of the world) as in some sense "normal" if only it does not show deficits. A sound condition for one country (say, for an underdeveloped one) may be permanent deficits on current account, for only in this way can such a country receive the resources necessary for its development. By the same token, a rich, highly industrialized country ought to achieve large surpluses. This is the channel through which it transfers capital abroad. In a state of sound equilibrium of the world economy, capital would be expected to yield higher returns where it is scarce. A sustained flow from capital-rich to underdeveloped regions, both within countries and in their international exchanges, is what we would expect to happen.

The model economy in which the normal working of the market has done (presumably even overdone) precisely this during the decades of the 1950's has been West Germany. On the average, West Germany has achieved export surpluses amounting to 3.2 per cent of its gross national product (2.3 per cent if we include West Berlin) from 1952 to

TABLE 2
EXPORT PRICES OF STEEL PRODUCTS
(\$ per metric ton f.o.b. port of shipment)

	European Coal and Steel Community Countries			United States		
	Feb. 1958	Jan. 1960	Jan. 1962	Feb. 1958	Jan. 1960	Jan. 1962
Reinforcing bars	81-84	105-110	77-84	129.40	127.00	127.00
Merchant bars	97-101	110-114	94-96	130.00	133.00	130.30
Joists	98-103	101-102	94-95	128.10	131.85	126.30
Wire-rod	103-105	132-140	88-90	140.20	146.15	146.15
Hoop and strip	110-113	110-112	92-94	119.25	117.95	114.65
Plate	118-122	106-112	89-92	123.25	126.75	118.60
Hot-rolled sheet	150.50	158-163	106-115	140.85	141.75	141.75
Cold-rolled sheet	170.00	up to 225	116-121	159.60	156.75	156.75

Source: European Coal and Steel Community, *Tenth General Report on the Activities of the Community*, Luxembourg, 1962, pp. 576-578.

Prices are those of basic Bessemer (Thomas) quality for the Community, and of basic open-hearth steel for

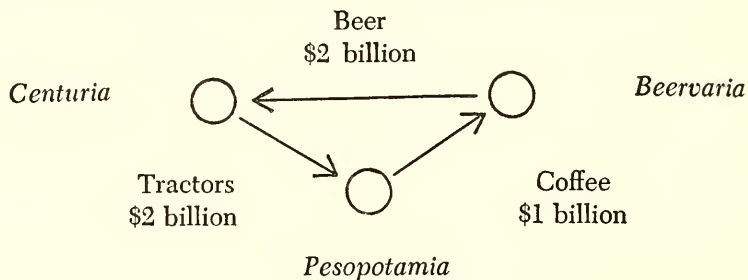
the United States. An allowance of approximately 5 per cent should be made in the prices listed to take account of the higher quality of American open-hearth steel.

1961. By comparison, the United States has realized only 1.3 per cent (0.6 per cent if military transfers by the U.S. government are excluded). This comparison reveals that things are really turned upside down when it is complained that West Germany has not adequately contributed toward the development of the world's less advanced economies while the United States has been doing too much. The percentage of a country's national income that is made available to the rest of the world in any given year in the form of export surpluses is the only adequate measure of the extent to which it provides other countries with economic resources during this period. Over the *long* run, it is important for all concerned whether the export surpluses are "financed" (in terms of balance-of-payments statistics; see Chapter III below) by (a) unilateral grants, (b) long-term private and government loans, (c) short-term investments, or (d) accumulation of gold and foreign-exchange reserves. In the *short* run, hardly anybody will notice the difference. The cost to the rest of the world of acquiring command over more resources is, in fact, lower under alternative (d) than under (b) or (c), since interest charges will generally be lower.

Some people think that the argument just criticized can be rescued by pointing out that West Germany has had its trade surpluses mostly with the advanced countries of Western Europe, whereas the United States shows substantial surpluses with the underdeveloped regions. It is argued that only *direct* export surpluses with less advanced economies provide an adequate measure of the extent to which a country contributes to their economic development, and that surpluses with the mature economies have no significance whatever for this purpose.

In spite of its superficial plausibility, this argument has to be rejected. The bilateral balances of any pair of countries in commercial trade reflect nothing but their comparative advantage in certain commodities, the tastes of their inhabitants, and their geographical proximity.

Let us illustrate by an example. Three imaginary countries, Centuria, Beervaria and Pesopotamia, export the indicated values of tractors, beer and coffee, respectively, in the direction shown by the arrows below. Tastes are such that each country's export commodity is bought by



only one other country. Let us also assume that Centuria and Beervaria are both highly industrialized whereas Pesopotamia is underdeveloped.

According to the reasoning just criticized, Centuria alone provides "development capital," whereas Beervaria even *receives* capital from poor Pesopotamia. In reality, Centuria does not transfer a single ounce of real resources to the outside world since its imports exactly balance exports. Beervaria, by contrast, exports twice the amount it imports. It is quite immaterial that the resources it makes available are (economically) "transformed" in Centuria before they reach the underdeveloped economy of Pesopotamia. The Beervarian economy would not be strained any more if all its exports went to Pesopotamia and all its imports came from Centuria.

The fallacy just dissected has a close, though perhaps not immediately obvious, parallel in another one. It used to be a frequently heard argument in Germany that the D-mark was clearly not undervalued with respect to the U.S. dollar because West Germany had for years suffered huge import surpluses in its trade with the United States. This reasoning overlooks the fact that a currency can, if a reasonable degree of convertibility is assured, only be undervalued or overvalued with respect to *all* other currencies. Bilateral trading balances between any pair of countries are, to drive the point home, only a reflection of the peculiarities of production conditions and consumption habits.

To anticipate another possible mistake: the nature of the commodities a country exports is also irrelevant for the question whether or not it contributes to the economic development of other regions. A country with an import surplus contributes nothing even though machines may be its only export product. Another economy exporting nothing but consumer goods may provide resources for development on a large scale as long as it shows a substantial export surplus. By importing consumer goods, less developed countries can set aside resources for the formation of capital equipment (perhaps in the intangible form of improving educational standards) just as much as when they import the latter and use their resources predominantly for the production of consumer goods. Similarly, the fact that, in the preceding example, Centuria exports tractors whereas Beervaria exports beer does not make the former a country providing development capital, nor does it prevent the latter from being one. To ensure efficient allocation of the world's resources, a country's comparative advantage in the different possible lines of production should be the only relevant criterion for deciding which goods it ought to import and which it ought to produce at home.

At the time when concern over the U.S. balance of payments reached its height, it was widely believed that an increase in West Germany's development-assistance program could materially reduce the American

difficulties. This expectation was, I am afraid, out of all proportion to reality.

German government statistics show loans and grants for development assistance amounting to approximately 0.9 and 1.0 per cent of the country's gross national product during 1960 and 1961 (somewhat more than the corresponding figures for American non-military development aid). These funds are, unless specifically tied to purchases in the United States (which they were not), used by the receiving countries to acquire goods and services all over the world. In the last few years, about one-fifth of the imports of the less developed countries outside the Soviet orbit was purchased in the United States. Assuming that this proportion remains approximately constant, all of West Germany's development assistance must have induced at most \$200 million of additional U.S. exports per year, a figure corresponding to about 1/30 of one per cent of America's gross national product. Any normally functioning economy ought to be able to achieve an increase of exports of such negligible proportions without any special prodding, but especially an economy suffering from unemployment to the tune of about 6 per cent of its working population.⁵

5. *International Liquidity*

There is a widespread belief that the recurring balance-of-payments crises in one country after another are due to a shortage of "international liquidity." The stunning effect of the "liquidity scare" is achieved by a simple trick with figures. First, short-term indebtedness of the United States and the United Kingdom is added to the value of all holdings of gold by central banks and defined as the measure of "world liquidity." The development through time of this variable is then compared with the evolution of total world trade. It is inevitably found that the ratio of the former to the latter has steadily declined. Suggestive analogy (a) with the need for liquid funds of a single firm or (b) with the transactions demand for money of a whole economy provokes the proper state of alarm in the reader.

Both of these analogies are seriously misleading. The reader should convince himself that *all* international transactions resulting from trade in commodities and services are paid in national currencies. There is consequently no need for an international "means of payment." The first analogy does not establish a need for anything one chooses to define as "international liquidity" to increase approximately in proportion to the rise in the volume of world trade.

⁵ Sources: Bundesminister für Wirtschaft, *Tages-Nachrichten*, Bonn, Sept. 29, 1962; U.S. Department of Commerce, *Survey of Current Business*, July 1962; International Monetary Fund, *International Financial Statistics* (monthly).

Since the exponents of the liquidity scare define bank deposits denominated in national currencies and held by foreign central banks or governments as part of "world liquidity," the whole problem could be solved simply, but without any real benefit for the world, through the mutual extension of credits by two central banks. The sterility of such an exercise ought to be quite obvious. The practice of according only deposits in dollars and pounds the status of "international liquidity" is particularly difficult to justify at a time when just these two currencies are potentially threatened by devaluation and therefore constitute much less attractive assets than many other currencies.

✓ A more appealing interpretation of the liquidity scare is that there ought to be a means of bridging temporary balance-of-payments disequilibria, and that the magnitude of these disequilibria is likely to rise in proportion to the increase in world trade.

This latter view rests on a confusion between the balance on current account (trade in commodities and services) and the balance of payments as a whole (including capital movements as well). It is indeed natural to expect that the imbalances in commercial trade increase in size as the value of world trade rises, but this has no significance for the balances of *payments*. In a normally functioning world economy, trade deficits could be bridged without difficulty by voluntary private and public capital transfers, just as deficits in trade between different regions of the same country do not create any problems.

If trade deficits are not willingly equilibrated by private capital flows and a central bank continuously loses gold and foreign-exchange reserves, this can only occur because two conditions simultaneously hold: (1) exchange rates are pegged and the central bank is obliged to intervene through sales of foreign exchange, (2) the country's policies violate the strict rules imposed by a system of constant exchange rates. In the absence of condition (1) (i.e., if exchange rates were free to fluctuate), the central bank could not suffer a loss of reserves because it would not be under any obligation to intervene on the foreign-exchange markets. If condition (2) did not hold (i.e., if the country pursued the monetary and other policies that are implied by rigidly stable par values), it could not suffer excessive import surpluses (or insufficient export surpluses). "Excessive" is here defined as a level of trade imbalance that is not warranted by the extent of voluntary private and public capital movements. Temporary imbalances could always arise, to be sure, for it is humanly impossible to synchronize public policies in different countries so perfectly that they never do. The appropriate adjustment of interest rates would, however, immediately bring about an equilibrating movement of short-term private capital.

Only when conditions in different countries are such that the long-run

stability of pegged exchange rates is not assured—in other words, when governments are unwilling or unable to subject their economies to the rigorous discipline of the gold standard while insisting on keeping up appearances in the form of rigid par values—will equilibrating private capital flows not be willingly forthcoming. They are, on the contrary, most likely to aggravate a disequilibrium when exchange rates are pegged. It is under such conditions that the clamor for more international liquidity is likely to be most insistent. The standard argument that the trouble is only caused by speculative capital movements will then also appear most convincing to the layman, for he is almost certain to be impressed by the latest statistics indicating that the trade balance does not show a significant deterioration (it may even be in surplus) whereas short-term capital outflows accelerate by leaps and bounds.

It pays to liberate oneself from such myopia and to recognize that speculative capital movements are in most cases only the outward manifestation of a rather durable disequilibrium in commercial trade. Whatever new institutions are created to counterbalance the flow of private capital will under these conditions only serve to postpone general recognition of the true nature of the trouble and the type of policy action that is really required.

Such errors of judgment cannot cause too much harm if their principal consequence is the extension of temporary credits to underdeveloped nations. Less magnanimity is indicated if it is proposed to grant virtually free credits under the title of an increase of “world liquidity” to advanced industrial countries such as the United States and the United Kingdom. There is all the less reason for such action at a time when these advanced countries are stagnating and could, without any strain on their resources, solve both their balance-of-payments and their employment difficulties very easily through an expansion of exports. The only obstacle that stands in the way is, to reiterate the point once again, the overvaluation of their currencies which renders many of their potential exports uncompetitive on the world markets.

6. *The “Key Currencies”*

It is sometimes conceded that it may be possible (and perhaps even advisable) for smaller countries to adopt flexible exchange rates, but not for the so-called “key-currency” countries, the United States and Britain. Since most countries use deposits in U.S. dollars or pounds sterling as part of their international reserves, they could not be expected to assume the risks involved in free fluctuation of the rates at which these currencies can be converted into their own. For the same

reason, discontinuous adjustments of par values meet with even greater resistance in the case of these currencies than elsewhere.

There is no doubt that the problem of the key currencies is one of the weakest links in the Bretton Woods system. The breach of confidence involved in arbitrary, unilateral exchange-rate adjustments to the disadvantage of almost all other countries is so serious that one can well understand the hesitation with which the American and British governments approach the question of devaluation of dollar or pound. At the same time, awareness of the grave difficulties that would be created for the United States and Britain by a liquidation of foreign dollar or pound reserves makes other countries extremely reluctant to safeguard their own interests, no matter how precarious the position of the two key currencies may appear.

It is practically impossible for the American and British authorities to throw the shadow of a doubt on their determination to preserve the established par values for their currencies, *even if* a guarantee were contemplated to provide for full compensation of devaluation losses of all official foreign holders of dollars and pounds. As soon as the suspicion becomes general that the dollar might be devalued, not only foreigners, but also all American holders of liquid funds have every incentive quickly to transfer them abroad. As a consequence of the obligation of central banks to buy dollars when the point of intervention has been reached, such funds would promptly become official reserves. The mushrooming of official foreign dollar holdings is apt to make the position of the dollar more and more precarious and the burden of any contemplated exchange-rate guarantee a very high one.

Similar problems would arise at the moment of transition from pegged to flexible rates. It is, however, necessary to separate the once-for-all problem of transition from the difficulties, real or imagined, that remain over the long run once the first step has been taken. These problems are not likely to be more difficult for key-currency countries than for others. Let us recall once more that an exchange rate is a *relative*, not an absolute price. It is therefore difficult to justify the view that it might be feasible to adopt exchange-rate flexibility for all other currencies, but not for the dollar (and possibly the pound). The nature of exchange rates as exchange *ratios* implies that the dollar could not help being a currency with freely fluctuating rates once all foreign governments decided to adopt this system. The preservation of a rigid link only of the U.S. dollar with gold is most unlikely to be of much interest to foreign central bankers, and even less to commercial traders, once the gold link of all other currencies has been severed.

Economists are well advised always clearly to indicate the cost of any policy recommendation they endorse. As things stand now, the preservation of present par values means to force stagnation on two of the

world's leading economies. The value of real output that is thus irretrievably lost in any single year is undoubtedly much higher than the once-for-all cost of depreciation *even if* all foreign holders of dollars and pounds were to be fully compensated for their losses.⁶

One also ought to keep in mind that the practice of keeping large official reserves in "key currencies" is itself only a direct by-product of the Bretton Woods system. Once central banks are relieved of the obligation to intervene on the foreign-exchange markets, they no longer have to hold large reserves for this purpose. Exchange rates need nevertheless not fluctuate widely in the absence of official intervention. Alert monetary policies along the lines recommended in the following chapters would make private capital movements provide all the "international liquidity" that will ever be needed. The heavy and totally unnecessary burdens imposed on key-currency countries by the present system would be immediately removed.

There is a certain irony in the fact that it should be precisely the two "key-currency" countries which have for the past few years encountered particularly severe balance-of-payments difficulties among all major industrial nations, and where the problem of sellers' inflation appears to be most serious of all, checked rather precariously by monetary and fiscal policy at the cost of prolonged economic stagnation. As long as this state of affairs persists, there is little hope in any case that the role of dollar and pound in the present world monetary system can be long maintained. Dollar and pound would appear to be among the more unlikely choices for "international reserve currencies" if a system modeled after the blueprint of Bretton Woods were now to be newly created.

7. *Exchange Rates and Economic Integration*

One can frequently hear the objection that fluctuating exchange rates would be a step backward on the path toward greater integration of the world economy, and that, in particular, they are incompatible with an economic union such as the European Economic Community. With the prospect of closer attachment of the United States to the Community, this argument will probably be increasingly used as an additional reason why an unpegging of the U.S. dollar must be ruled out.

Article 107 of the Treaty of Rome which established the European Economic Community stipulates that "each Member State shall treat its policy with regard to exchange rates as a matter of common interest."

⁶ Another warning about sellers' inflation is at least worth a footnote. Depreciation of a floating dollar or pound can in all probability restore reasonably full employment over the long run only if this does not in turn lead to a self-inflammatory tendency of powerful labor and business groups to push for ever higher wages and prices.

This formulation seems deliberately vague. Are there any economic variables that should not be treated as matters of common interest by an economic community of nations, especially if they affect every single industry in all member countries as vitally as exchange rates? Many people interpret this article as implying that fluctuating rates are ruled out for the members of the union.

The appropriate indicator of the degree in which a group of countries becomes more closely integrated is the increase of trade and capital movements between them. Monetary arrangements are only of interest inasmuch as they help or hinder this principal objective. It is frequently taken to be self-evident that the free fluctuation of exchange rates is detrimental to trade. This belief does not rhyme very well with theoretical considerations when the strong built-in tendency toward trade and payments restriction in a system of pegged and, almost inevitably, occasionally or permanently maladjusted exchange rates is realized. It does not agree with empirical evidence either. The reader is referred to Table 4, in Chapter III below, where it is seen that the decline of trade during the great depression was least pronounced in the countries with flexible exchange rates, by comparison both with the group that remained on the gold standard and the countries that instituted exchange controls.

The position of the partisans of exchange-rate pegging is equally weak with respect to capital movements. In sharp contrast to the view that flexible exchange rates serve to repel international capital flows, Canada has, during the decade when the Canadian dollar was a fluctuating currency, year after year experienced by far the greatest rate of capital inflow of any country in the world.⁷

Developments since the end of World War II have, on the other hand, provided a wealth of evidence that exchange-rate pegging leads, through the almost inevitable overvaluation of some currencies with respect to others, to serious disruptions of international capital movements. Even convertibility for all transactions on current account, as prescribed in Article VIII of the IMF *Articles of Agreement*, is a considerable distance away from true convertibility. Only if all types of foreign and domestic payments received truly equal treatment in *every* country would the vulnerability of the present system become fully apparent.

A parallel is often drawn between a single country and an economically integrated community of nations, and it is pointed out that

⁷ See the two United Nations publications, *The International Flow of Private Capital, 1946-1952*, and *The International Flow of Private Capital, 1956-1958*, (New York, 1954 and 1959). Contrary to a widely held view, a remarkably high proportion of foreign investment in Canada took the form of purchases of fixed-interest securities denominated in Canadian currency.

the different regions of one country also do not have separate currencies that would exchange at variable rates. This comparison can serve as a valid and convincing argument for creating a single currency and a single center of authority for the monetary policy of an economic community of nations, but hardly for the defense of the present system. Within a country, no restrictions exist on payments between its different regions, and everybody knows that no such restrictions will ever be introduced. None of the regions has its own monetary standard, and everybody is therefore assured that no region ever can, even if it should want to, abruptly change the par value of its regional currency, or merely pursue independent monetary policies. If divergent regional rates of economic growth or divergent movements of prices and incomes develop within a single country, free movement of all factors of production is always assured to ease the stresses and strains thus created. Fulfillment of the first two conditions, eternal freedom of all payments and a single monetary standard, is not prescribed in the Treaty of Rome, and it is wishful thinking to believe that the third, complete freedom of all factor movements, will in the foreseeable future be fulfilled to the extent to which it holds within a country.

It is hardly necessary to emphasize that there is no chance that any of these conditions will be anywhere near fulfillment in the world at large in the generations to come. Should they once be assured in the more remote future, the creation of a single monetary standard for the whole world will not only be the most sensible arrangement, but also the *only* one that can effectively prevent the pursuit of independent national monetary policies. To pose the question whether they are prepared to create a single currency and to surrender to a single center of monetary authority can serve as a convenient test of whether governments are really prepared to accept the responsibilities implied by truly fixed exchange rates.

If smooth fluctuation of exchange rates is to be ruled out for an economic community, then certainly the abrupt adjustments foreseen in the *Articles of Agreement* of the IMF must be forbidden. Nobody has argued, however, that the revaluation of the D-Mark and the Dutch guilder in March 1961 violated the Treaty of Rome. In fact, its article 107, sec. 2, explicitly recognizes the possibility of par-value alterations.

But why even allow the movement of exchange rates within the margins stipulated at Bretton Woods? No such movement is possible within a country, and if the analogy to national currency systems is to hold at all, the currencies of the members of an economic community must always exchange at a single, rigidly fixed parity.

If the achievement of rigidly cemented exchange rates between the

currencies of an economic community of nations were a feasible proposition, this still leaves open the question of what policy the community ought to follow toward the rest of the world. As long as the integrated countries want to determine their own economic policies rather than be slavishly subject to the pushes and pulls of all random developments in the rest of the world, they will have no choice but either to prevent the free flow of payments with outside countries, or to let exchange rates between their currencies and those of other countries fluctuate freely.

The most destructive assault on the "integrationist" defense of the Bretton Woods system is yet to come. If full integration of monetary policies between the member countries is the only logical solution, the very act of pegging exchange rates *through direct intervention on the foreign-exchange markets* is already a violation of that basic objective. Full coordination of monetary policies requires each central bank always to take immediate action, through open-market operations and the other traditional tools of central banking, to counteract any tendency of exchange rates to diverge from the stated parities. Artificial intervention on the foreign-exchange markets to support its currency is, unless it remains limited to the most minute operations in the very short run, an escapist means of *evading* the responsibilities implied by complete monetary integration. All too frequently, these departures, meant to be only temporary, last long enough to lead to rather severe maladjustments over time.

All those who like to use the single-currency analogy in support of pegged exchange rates for the world as a whole are urged to pay careful attention to this last consideration. It cannot be too strongly emphasized, in particular, that the call for ever bigger international funds, stand-by agreements and all the rest, for bridging balance-of-payments deficits is somewhat out of tune with the aim of achieving a maximum of monetary integration. All these devices only facilitate a *loosening* of the degree of coordination of monetary policies. National monetary areas, on whose example our present world monetary system is alleged to be (or ought to be) modeled, do not possess any "monetary funds" or "payments unions" to bridge temporary imbalances between their various regions. In spite of this "deficiency," no shortage of "inter-regional liquidity" has ever been noticed.

8. *Canada's Exchange-Rate Policy*

Recent Canadian experience provides a most interesting case study in the issues discussed here. A few remarks on the Canadian experiment appear to be all the more necessary in view of the rather varied interpretations it has found.

Following World War II, Canada subscribed to the rules of Bretton Woods until September 1950. At that time, the Canadian government announced that it would henceforth let exchange rates find their own level in a free exchange market, except for minor smoothing operations from day to day. The original reason for this move was a persistent balance-of-payments surplus, accentuated eventually by a snowballing inflow of speculative capital from the United States which made appreciation of the currency inescapable. Previous experience made temporary flexibility seem a more promising method of finding the appropriate level of exchange rates than the immediate announcement of a new par value. It was not at first contemplated, however, to make flexible rates a permanent institution.

Satisfaction with the experiment nevertheless made it appear at least unnecessary to part with it. Only some time after the change of government in 1957 did exchange-rate policy again enter the realm of political controversy. A growing segment of the public and the business world then began to see two principal shortcomings in the system of flexible rates:

1. the huge flows of investment capital from the United States that were attributed to that system and which threatened, in the eyes of many Canadians, to make the country's industries a mere appendix of powerful foreign financial interests;
2. growing unemployment, more or less in step with the gradual deepening of stagnation in the United States.

The first charge must appear highly surprising in view of the widespread belief that exchange-rate flexibility tends to *discourage* the inflow of capital. Nobody has yet given a reasonably consistent explanation of why the institution of flexible rates should be particularly conducive to capital movements in only one direction, and I think we can safely dismiss this part of the indictment as purest fantasy.

The second charge is equally puzzling. Has it not rather been generally accepted as one of the characteristic features of flexible rates, for better or for worse, that they make it *easier* for a country to pursue independent full-employment policies even if the rest of the world is depressed? If its government and central bank fail to pursue policies with this end in mind, but insist on holding interest rates high, the rating of its currency in a free exchange market will certainly reflect this fact by being higher than it would otherwise have been. As a result, the country is bound to experience a higher import surplus (or smaller export surplus), compared with what would have happened under more expansionary policies. Elementary economics teaches us that all this can be changed at a moment's notice by a sufficient easing of credit.

For reasons beyond this author's comprehension, the Canadian au-

thorities did not adopt this line of reasoning, but decided in 1961 that the desired employment effect was to be achieved by artificially depressing the rating of the Canadian dollar on the exchange markets. That year thus saw the end of the era of genuinely free exchange rates in Canada. For a few months, the government relied on the "announcement effect" of its intentions to make the Canadian dollar depreciate. When this effect was apparently thought too weak, direct intervention followed and speculative capital outflow in anticipation of further depreciation did the rest. The International Monetary Fund and the United States government by then began to exercise strong pressure on Canada to return to pegged rates. The Canadian government yielded to this pressure in May 1962 and fixed the par value of its currency at .925 U.S. dollars. To judge from the sizable credit line with which the Canadian move was honored (\$1 billion from the IMF and some of its leading members, including countries such as the United States and Britain whose own balance-of-payments position was precarious enough), it must have been greeted with enthusiasm by the community of central bankers.

The opinion appears to be rather widely shared that the abandonment of flexible rates by Canada "has shown" that this system does not work properly. This astonishing reading of history calls for additional comment on at least the following facts:

1. The Canadian experience is a striking demonstration of the possible degree of stability of freely fluctuating rates. The maximum amplitude of fluctuation during the period from 1952 to 1961 was 6 per cent. During the period of "fixed" rates from the end of World War II until 1950, on the other hand, the Canadian dollar was revalued and devalued, respectively, by about 10 per cent on two occasions (July 1946 and September 1949). Within a year of the abandonment of freely fluctuating rates of exchange in 1961, the Canadian dollar had again undergone a change of almost 10 per cent with respect to the U.S. dollar.
2. It is often claimed that the Canadian dollar was so relatively stable during the decade of flexibility because of a deep-seated (though irrational) feeling in the public that parity with the U.S. dollar was the "natural" state of affairs. If that were true, no difficulties should have developed at the time (1946 to 1949) when the Canadian dollar was fixed exactly at parity with the U.S. dollar. The Canadian government nevertheless felt compelled to devalue by 10 per cent in September 1949. The popular thesis of "parity psychology" is further weakened by the fact that parity was attained only for a very few days during the ten-year period from 1952 to 1961 and that massive speculation *against* a return to parity set in whenever

it was approached. If parity psychology is to have an effect on events, businesses and bankers must take deliberate exchange risks in the expectation of a return to parity whenever the actual rate of exchange tends to deviate from it. It is not sufficient that people merely *talk* about it.

The events after the return to pegged rates provide further evidence: after the new par value had been fixed at a discount of 7½ per cent with respect to the U.S. dollar, massive speculation in the direction of an even *greater* discount set in.

3. To my knowledge, neither exporters nor importers have complained that the free fluctuation of the Canadian dollar inhibited their business. As noted repeatedly on earlier occasions, capital movements do not seem to have been bothered either, if we judge by the fact that Canada was by all odds the world's most substantial importer of foreign capital in the 1950's.
4. The balance-of-payments difficulties following the act of pegging the Canadian dollar in May 1962 prompted the Canadian government after a few weeks to impose a drastic special tariff of between 5 and 15 per cent on most imports. The relative freedom of trade permissible under the alternatives of pegged and flexible rates was thus demonstrated in an unexpectedly striking way.

At the same time, Canada was forced to raise its discount rate from 5 to 6 per cent to check the outflow of capital, at a time when business was stagnating.

5. Whereas flexible rates became unpopular in Canada because it was felt that free fluctuation was apt to keep the rating of the Canadian dollar so high as to inhibit Canadian exports, the United States objected to them in the more recent past for the opposite reason. The system enabled Canada, the United States charged, to manipulate the rates in such a way that they gave Canadian exporters an unfair advantage over their United States competitors. The practice of manipulation after 1961 must, first of all, be correctly interpreted as a *violation* of the principle of free fluctuation of exchange rates. In view of their earlier misgivings, it must have come as a shock to American government officials when the Canadian government in May 1962 yielded to pressure from the United States and the International Monetary Fund by pegging its currency at a level that implied a *further* depreciation of 3 per cent.
6. All the evidence suggests that the forces of cost inflation were operative in Canada, as they were in the United States, during the late 1950's. The hesitation to apply expansionary monetary policies at a time of growing unemployment could be justified on the basis

of a preference for price stability over full employment. Such a preference is not, however, consistent either with the policy of import restriction advocated by Mr. Coyne, then governor of the Bank of Canada, or with more expansionary fiscal policies combined with a policy of forcing depreciation of the Canadian dollar by artificial intervention on the exchange markets, the measures endorsed by Mr. Fleming, the Minister of Finance, in their acrimonious dispute of 1961. Any one of these alternatives could have achieved a higher level of employment only by increasing aggregate demand, and this would necessarily have had precisely the same effect on the price level as the pursuit of expansionary monetary policies towards that end.⁸

⁸ See "A Political Assassination?" *The Economist*, June 17, 1961.

II. The Function of International Trade

It is highly appropriate to begin a study of the foreign-exchange markets by setting out the basic purpose of international trade. The most drastic attempts to interfere with the freedom of trade across country boundaries have perhaps been due neither to the desire to foster industrial development nor to the egotistical pursuit of narrow producers' interests, but rather to the desperate attempts to overcome balance-of-payments difficulties by simply preventing the flow of goods and services above certain levels. Such difficulties can, frequent assertions to the contrary notwithstanding, always be traced back to maladjustment of exchange rates. All recommendations concerning exchange-rate policy that are made in this study are prompted by one single aim: the promotion of international trade and capital movements in the interest of efficient allocation of the world's manpower, capital equipment, and other resources.

Some of these terms may already require more detailed explanation. When economists speak of efficient allocation of resources, they have two different aspects of production in mind. First, resources (such as labor or machines) ought to be devoted toward the production of all commodities in approximately the relative proportions desired by the community. In any society that respects the sovereignty of the individual, each person's preferences will in some way have to enter the formulation of the community's "desires." To go beyond this admittedly vague statement would confront us with some rather intractable theoretical difficulties extraneous to the main topic being discussed here and for the most part even foreign to economic analysis properly speaking. We shall have to leave this involved and controversial matter here.

The second aspect of efficient resource allocation is more amenable to economic analysis. Not only should, according to the first requirement, the "correct" *relative* quantities of different commodities be produced, but, given their proportions to each other and given the limited quantities of available resources, the greatest attainable *absolute* quantity of each of them ought to be produced.

Maximum production in this sense is not being attained, as is immediately evident, if a substantial part of a resource such as productive human labor is not being utilized. Many people seem to recognize unemployment as the only possible reason why the social product is not being maximized. National-income analysis has been emphasized to such an extent in recent years that the public and even many economists tend to be less and less aware of the wastage (in terms of actual

quantities of goods that are not being produced) due to misallocation of *fully employed* resources. Anybody can see that resources are being squandered if they are left idle; optimal allocation, on the other hand, is a much more subtle matter whose understanding requires a considerably higher degree of economic sophistication.

The relative importance of unemployment on the one hand, misallocation on the other, is difficult to assess in any given instance. A clear indication that the latter is by no means a negligible factor in making an economy fall short of its production potential is provided by the substantial differences between the growth rates of fully employed and otherwise comparable economies. Both the employment and the allocation effects of exchange-rate maladjustment are important topics for investigation in this study. In this chapter, we shall say a few more words about the latter.

The same commodity can usually be produced by a variety of different combinations of productive factors. Cloth, for example, can be woven by applying very primitive implements and many hours of work, or by employing machines of different grades of complexity and correspondingly fewer hours of human labor. Only the economically uninitiated believe sometimes that the technically most advanced method (presumably the one requiring the smallest number of working hours together with rather elaborate machinery) is necessarily the optimal method under any circumstances and in any country. A little reflection shows, first of all, that any additional resources embodied in more advanced textile machinery, for example, will, as long as the economy is employed to full capacity, have to be withdrawn from other sectors which will consequently have to apply less progressive techniques. In order to assure optimal performance of the available resources, a delicate balance has to be struck between the proportions used of the various factors of production in their innumerable possible uses. The society will be penalized for any deviation from this optimal allocation in that its productive plant produces less—perhaps a great deal less—of certain commodities without corresponding increases in the quantities available of others.

We have so far implicitly assumed an economy in isolation. The possibility of trading with other countries adds a new dimension. Commodities can now be made available for domestic consumption not only by producing them within the country, but also by expanding the production of certain other goods which are then used to acquire in exchange for them the desired commodities (or services) from other countries.

One obvious reason why this roundabout procedure may prove more advantageous than the superficially simpler way of producing them

directly is that other countries may possess certain factors, including natural conditions of production such as mineral resources, or a climate particularly suitable for certain agricultural crops, that are not available at home. In more general terms, the relative proportions of the various factors of production possessed by different countries may differ. One country may, for example, be considerably more "capital-rich" than another in the sense that a greater quantity of machines per worker, or more recent and advanced machinery is available. Although the gains to be derived from trade with the rest of the world may not be quite as obvious in this case as in the one just mentioned, the difference is only one of degree and the advantages to be derived from trade with the rest of the world are just as real. The case of special factors (such as certain minerals) which are found only in one country and not in others is only an extreme example of this general proposition. Whenever differences in factor proportions exist, it will be to the advantage of every single country to produce relatively more of those commodities for whose production it is *comparatively* better endowed than others. The phrase "*comparatively* better" is crucial: it does not matter at all if it should turn out that one country is able to produce *all* goods "more easily" (in whatever sense) than another.

At the same time, the fact that a *comparative* (as opposed to an absolute) advantage suffices for the profitability of international trade dispels the fears so often expressed by laymen that mutual trading between two countries might prove impossible because one country could outdo another in *every* line of production. A comparative advantage in the production of certain goods must, by definition, be possessed by every single country.

We have here concentrated on comparative advantage in production as a reason for mutually beneficial trading relations between different countries. Experience shows that the concept of comparative advantage usually encounters the most strenuous intellectual resistance among laymen. There are other sources of gains from trade with which the public is more familiar and which will therefore be treated more briefly. Their importance is not, of course, to be underestimated.

National specialization may lead to considerable economies because of the advantages of mass production. The burden of autarky would be a particularly heavy one for smaller countries because of this factor. Again, small countries will suffer even more than larger ones from restrictive practices of domestic monopolies if they are sheltered by protective commercial policies. Freer trade exposes them to the invigorating wind of competition from abroad.

Through historical accident, certain manufactures may have been developed to perfection in a limited region of the globe as certain

skills are handed down from generation to generation. The "division of knowledge" between different countries through trade may be as important an advantage as the "division of labor."

The free play of market forces will in general lead every country to specialize relatively to others (i.e., to produce more than its own needs, hence export) precisely in those commodities for whose production it is best suited. This general statement, whose detailed proof cannot be reproduced here, can only be modified by the well-known "infant-industry" argument against free trade. This argument rests on the possibility that certain sectors in which a country would, were they fully developed, enjoy a comparative advantage, lie dormant because the initial (real or imagined) obstacles to their development are too great for private industry to tackle as long as domestic markets are fully exposed to the competition of long-established foreign rivals. To make allowance for this qualification to the general case for free trade, as far as it is possible at all to do so in an objective manner, would require a country to impose *temporary* and *judiciously selected* obstacles to imports. The typical controls which are introduced to cope with balance-of-payments difficulties, and which are of principal interest for our topic, are almost inevitably of a kind that finds no possible justification in the infant-industry argument for protection. When an underdeveloped country prohibits imports of French perfumes, for example, because its policymakers believe that the scarce resources of foreign exchange are more urgently needed for "essential" imports, the country's own perfume industry and the production of equally frivolous articles is induced to expand. It would be a lucky, but most unlikely, coincidence if the country had a latent comparative advantage in just these and similar articles of conspicuous consumption or profusion.

To sum up: free world trade provides one special example of the general proposition that the free flow of commodities and services brings about, barring special circumstances, the optimal allocation of the world's resources and, hence, the most favorable conditions for rapid growth of the world economy. Although certain exceptions to this general rule are known, these exceptions, to the extent that they are amenable to objective analysis at all, provide at best a basis for temporary trade restrictions on carefully selected individual commodities, but not for the introduction of over-all impediments to trade and payments designed to make balance-of-payments disequilibria more manageable. Such restrictions typically follow entirely different rules. It follows that everything ought to be done in the field of exchange-rate policy to prevent balance-of-payments crises and the type of restrictions on international trade they almost inevitably entail.

III. The Balance of Payments

1. *The Market for Foreign Exchange*

While the gains from international trade are more conveniently—and more appropriately—discussed by abstracting from monetary phenomena, the problems discussed in this study arise from the existence of distinct national currencies in different countries. This brings an entirely new dimension into international transactions. Not only are goods traded against currencies (the practice of actually bartering goods against goods having been abandoned for thousands of years in the civilized parts of the world, except for occasional relapses into barbarism under modern bilateral-trading agreements), but different national currencies may be exchanged against each other.

Transactions involving only currencies may be undertaken with subsequent commodity deals in mind, with the intention of effecting purchases of securities or real estate, or for the plainly speculative purpose of temporarily holding one's liquid assets in the form of another country's currency because of a fear—or hope—that the ratios at which different currencies can be exchanged against each other may change.

Let us also point out here that there are, apart from the so-called "spot markets" on which currencies are acquired for immediate possession, other markets on which claims to delivery at specified future dates can be transacted. These are the so-called "forward-exchange markets." They will receive special treatment later. For the time being, we make the simplifying assumption that only spot markets in foreign exchange exist.

Basically, markets for currencies are no different from any other markets. "Foreign exchange"—the currency of some other country—is bought or offered for sale by private individuals, banks, corporations, institutions and governments. Sales contracts for specified amounts of other currencies are, as in other markets, concluded at certain prices per unit, the "exchange rates." Foreign-exchange markets have certain characteristics, however, which make them appear highly complicated if not mysterious to laymen. Most people are used to thinking of "markets" exclusively as trading arrangements where goods and services (or at least abstract titles to certain assets) are exchanged for money. The fact that money is exchanged against money on foreign-exchange markets is apt to nourish a vague impression that such transactions follow entirely different rules. It undoubtedly complicates matters further that in the overwhelming majority of exchange-market transactions the "commodity" being traded cannot be seen, heard, or felt, the operations consisting merely of bookkeeping entries in a

number of banks. Although it is currencies that are being bought and sold, it is worth stressing that these currencies are physically represented by bank notes or coins only in a minute fraction of the total sales volume. An American importer of coffee may have to pay in Brazilian cruzeiros, but he is not interested in acquiring Brazilian bank notes. Were he to do so, he would have to surrender them to the Brazilian exporter in any case. He incurs a great deal less trouble, risk and expense if he relies on the banking system to accomplish the same result by a few simple entries in his and his foreign partner's accounts.

It is highly advisable to keep firmly in mind that markets for foreign exchange have all the characteristics of genuine markets, the "commodity" being units of another currency. Once it has been grasped that exchange markets are not endowed with any peculiarities that would make them incomparable with any other markets, it is not difficult to understand that exchange rates, the prices of national currencies, fulfill exactly the same functions as prices in all other markets. First and foremost, they serve as rationing devices in assuring that no more of any foreign currency is being demanded than supplied at any instant. It ought to be easily understood that more foreign exchange may well be demanded than supplied (or vice-versa) if an exchange rate is artificially prevented from moving to its momentary equilibrium level. If there is any property that distinguishes exchange markets, it is their high degree of "perfection" in the economist's sense: a large number of participants enter exchange markets at any time and hardly any one of them has, when acting in isolation, an appreciable influence on the level of exchange rates. In the absence of official intervention, exchange rates are therefore determined under conditions as close to "perfect" competition as are likely to be found in any market in the real world. The ease and speed with which information about exchange markets can be transmitted, and with which large payments can be effected between countries and continents guarantees an unusually high degree of market transparency and unity of geographically distant parts of the exchange markets.

To the extent that greater perfection facilitates the functioning of the market mechanism—and about this there is little disagreement, most of the objections to reliance on free markets being based on the presence of imperfections of various sorts—the characteristics of foreign-exchange markets ought to make exchange rates particularly useful and reliable instruments for the allocation through the market mechanism. For all these reasons, it is rather surprising that it should have been exchange markets more than almost any others which have been subjected to price controls, and that governmental price-fixing in this

sector should have had the support not only of enemies of free competitive markets, but also of many of its devoted supporters.

2. *Balance-of-Payments Statistics*

All transactions affecting the foreign-exchange markets are summarized in the so-called "balance of payments." Table 3 presents the

	1960		1961	
	<i>Credits</i>	<i>Debits</i>	<i>Credits</i>	<i>Debits</i>
1. <i>Current Account</i>				
Exports of goods and services*	27.3		28.3	
Imports of goods and services		23.3		23.1
Private and official donations*		2.5		2.7
2. <i>Capital Account</i>				
Long-term capital movements		2.9		2.6
Short-term capital movements	0.3		0.0	
3. <i>Gold</i>	1.7		0.7	
Errors and Omissions		0.6		0.6
	<u>29.3</u>	<u>29.3</u>	<u>29.0</u>	<u>29.0</u>

* Without military transfers under grants.

Source: U.S. Department of Commerce, *Survey of Current Business*, March 1962.

major components of the American balance of payments for 1960. Within the "current account," entries giving rise to increased demand for U.S. dollars (foremost among them American exports) are listed on the "credit" side, items causing increased demand for foreign exchange on the "debit" side. The former tend to cause appreciation of the dollar, the latter depreciation. Owing to the importance of American government aid to other countries, the item "donations" shows rather large entries of \$2.5 and \$2.7 billion on the debit side (only non-military grants are included here).

The "capital account" is broken down into long- and short-term (net) capital movements. The adjective "net" is here meant to indicate that only *changes* in indebtedness during a given time interval are recorded, not the absolute amounts of the capital flows in both directions. The division between long- and short-term capital is somewhat arbitrary since typical long-term credit instruments (government bonds, for example) frequently serve as vehicles for short-term investment abroad, and vice versa. Additional demand for foreign currencies by United States residents for the purpose of acquiring foreign securities tends to cause depreciation of the U.S. dollar, just as if the same amount of foreign exchange had been purchased in order to pay for imports of

merchandise. Such an item (a "capital export" from the United States) is listed on the debit side, as are merchandise imports.

Gold exports (\$1.7 billion in 1960) make foreign exchange available to the United States (or reduce U.S. liabilities, respectively), as do exports of any other commodity. Gold transactions are always shown separately, however, for they follow entirely different rules. In the United States, ordinary citizens no longer have the right to demand reimbursement of Federal Reserve bank notes in gold. Only foreign governments and central banks are entitled to acquire gold at a fixed price of \$35 per ounce from the U.S. government. By serving to peg exchange rates for the dollar, this relic of the old gold standard fulfills in an indirect way the same function as the direct purchases and sales of foreign exchange practiced by central banks in other countries. The United States has not, until recently, held deposits with other central banks as foreign-exchange reserves. Its gold hoard used to be the only (official) international reserve held by the United States. As the combined gold and foreign-exchange holdings of other countries, it is the buffer whose changes match deficits or surpluses in all the other (autonomous) items in the balance of payments.

The balance of payments is arranged so that any "credit" is matched by a corresponding "debit." Ideally, credits and debits ought to add up to the same totals. Since the individual entries are estimated from different and largely independent sources of varying reliability, however, they never do. There are also discrepancies due to differences in the terms of payment for the various transactions which cannot be taken into account by statisticians. An item "Errors and Omissions" brings the accounts into formal balance.

The official presentation of the United States balance of payments differs from the summary given in our Table 3 in one essential respect. It does not show the *net* balance of all capital movements (separated, as in our table, into long- and short-term transactions), but distinguishes between the transactions on capital account by *United States residents*, on the one hand, and by *foreign residents*, on the other. What is then officially called the "deficit of the United States balance of payments" is not the balance of all autonomous payments (equal to the gold outflow plus any reduction in the official holdings of foreign exchange), but that figure plus the increase in U.S. short-term liabilities to the rest of the world. This has the curious effect that a simultaneous swap of short-term claims between an American and a foreign bank, for example, increases the officially recorded U.S. "balance-of-payments deficit" by exactly this amount, although nothing real has changed at all. The United States believes itself to be obliged to follow this procedure because it is committed to a standing offer to honor in

gold at a price of \$35 per ounce all official foreign short-term claims against the United States, and because all private short-term dollar holdings may become official at any time. Simultaneous short-term claims of U.S. residents against foreigners are, it is explained, no help in the eventuality that all official foreign holders of U.S. balances convert them into gold, for the U.S. government has no legal means at the present time of forcing U.S. residents to surrender their foreign assets when needed.

The American position in this respect is not, however, intrinsically different from the situation of any country with a fully convertible currency. Limited supplies of gold and foreign exchange impose exactly the same constraints elsewhere. Under full convertibility, moreover, even all bank notes and demand deposits held by *United States residents* can become claims against the U.S. gold stock at any time, for it is up to the owners' decision whether or not they want to transfer their deposits abroad. A fully consistent extension of the present practice would thus obviously be to call *any* increase of the money supply (currency plus demand deposits) part of the U.S. "balance-of-payments deficit."

There is no doubt that this curious bookkeeping practice is only imperfectly understood by the public and that it has contributed to a somewhat distorted view of the external position of the United States. There may, on the other hand, be a certain advantage in this, for Americans might otherwise have taken even longer to realize that something in their economy had turned sour.

3. *The Current Account*

a) Volume versus Value of Trade

The current account will first occupy our attention. In analyzing the consequences of exchange-rate adjustments on exports and imports, one should beware of a few possible pitfalls.

The only certain effects of exchange-rate alterations are those on the *quantities* of exports and imports. Depreciation, that is, a fall in the price of a country's currency on the exchange markets, encourages exports. If the foreign prices of export commodities were to remain unchanged, their prices per unit in terms of domestic currency must have risen in the exact proportion of the depreciation. Alternatively, momentarily constant *domestic* prices imply that the prices of exports in terms of foreign currency have fallen by the same percentage by which the currency has depreciated. This will certainly induce foreign buyers to purchase more of them.

In any actual situation, depreciation is likely to lead to a result inter-

mediate between these two extremes, with *domestic* prices of export goods rising and *foreign* prices falling, both changes being less than the proportion by which the currency has depreciated. Since domestic prices of exports always tend to rise after depreciation, producers will be induced to increase the quantity of exports. With both unit value and quantity rising, depreciation must necessarily increase the value of exports in terms of *domestic* currency.

This is not, however, assured of the value of exports in terms of *foreign* currency. We noted that foreign prices of export commodities tend to fall (otherwise, foreigners would not feel induced to buy more of them). The percentage fall in prices *may*, on the average, be greater than the percentage increase of the quantities sold. The foreign-currency value of exports would then be *lower* after depreciation than before.¹

Exactly the same reasoning can be applied to imports if we substitute "foreign currency" for "domestic" and vice-versa. Depreciation of one country's currency amounts to appreciation of all other currencies, and one country's exports must be the imports of other countries. By an argument equivalent to that above, we conclude that depreciation always lowers the value of a country's imports in terms of foreign currency, while the effect on their value in domestic currency remains in doubt.

Economic theorists have investigated the exact conditions under which the combined effects of depreciation on exports and imports lead to an improvement or a deterioration, respectively, of a country's balance on current account. Suffice it to say that at first blush neither one nor the other outcome appears more plausible. To establish the presumption that an improvement of the balance on current account is, after all, the overwhelmingly more probable result of depreciation, one has to take a mental detour. For this purpose, it is necessary to know that the foreign-exchange market cannot be stable, that is, a free exchange rate could not come to rest, in a region of exchange-rate values where depreciation results in a worsening of the current account.

Turning the argument around, we conclude that a freely floating exchange rate *must* always come to rest in a region where depreciation does have the consequences expected by the layman's intuition, i.e., an improvement of the balance on current account. Whenever a floating rate undergoes a slight adjustment—as a result of an autonomous capital movement, for example—this "normal" effect is assured, although it is in doubt—at least in the realm of pure theory—when an administratively pegged rate is altered.

¹ In this latter case, economists say that demand for a country's exports is "inelastic." It is not suggested here that such a possibility is at all likely.

b) The Terms of Trade

Another instance in which the layman's intuition may go astray is the connection between exchange rates and the so-called "terms of trade." The latter are defined as the ratio of a country's index of export prices to the index of import prices, both expressed in the *same* currency units. If this ratio falls, we say that a country's terms of trade have worsened because it now obtains relatively fewer imports per unit of its own exports.

The notion that depreciation is equivalent to a deterioration of the terms of trade appears so self-evident at first sight that one had best start by emphasizing that there is no necessary connection at all between exchange rates and the terms of trade. Strictly speaking, this is not quite correct. The link between the two is as tenuous as it is complicated, however, so that the beginner may just as well take the statement at face value.²

The usual mistake is made by arguing that depreciation lowers the prices of exports and raises the prices of imports, and that this is exactly the definition of a worsening of the terms of trade.

A fall in export prices only takes place in terms of *foreign* currency, however, whereas import prices rise in terms of *domestic* currency units. If we switched the use of currencies around, we would come to the very *opposite* (and equally faulty) conclusion that the terms of trade of a depreciating currency must always improve. To verify changes in the terms of trade, all prices have to be consistently expressed in the *same* currency units. What is true, but wholly irrelevant to the movement of the terms of trade, is that depreciation generally makes the average price level of all internationally traded goods (in other words, both exports and imports) rise in home currency relative to typically "domestic" goods which are produced as well as consumed within the country.

Whatever else may be said against depreciation, the charge that it necessarily lowers a country's standard of living by worsening its terms of trade must be dismissed, unless it finds support in certain special, empirically established features of a country's international trade. There is only one qualification to this conclusion which will be taken up in the following section.

² As a general rule, one can say that depreciation is more likely to result in a worsening of the terms of trade the more elastic are the supplies of exports in both the depreciating country and in the rest of the world. In other words, the layman's intuition is more likely to be confirmed the more easily the quantities of exports increase when their prices (in terms of the exporting country's currency) rise. The higher the demand elasticities, on the other hand, the more probable is the opposite result.

c) The "Absorption Approach"

One school holds that all balance-of-payments analysis in terms of prices and exchange rates is beside the point, and that a much more direct understanding of the adjustment mechanism can be acquired by investigating the matter in terms of national-income aggregates. The "absorption approach" points out that under conditions of full employment a country can reduce an import surplus (or increase an export surplus, respectively) only by making a larger share of its total output available to the rest of the world. Unless resources lie idle and domestic production can be raised through their employment, domestic "absorption," that is, the use of the country's resources for domestic needs (whether for consumption, investment or government purchases) has to be reduced. Currency depreciation, this argument continues, normally cannot by itself depress absorption. In order to achieve its main objective, it will have to be accompanied by the measures that are customarily used toward this end, in particular, restrictive fiscal and monetary policies or direct controls. Carried to its supposedly logical conclusion, the absorption argument would maintain that, as long as a government is willing to adopt such restrictive measures, depreciation becomes superfluous anyway.

In spite of its superficial plausibility, the reasoning of the absorption school stands in frontal conflict with some of the very foundations of economic analysis. To begin with, it regards the balance on current account, i.e., the *difference* between export and import values (always including services) as the only variable of significance. The actual *magnitudes* of exports and imports do not enter at all. With this, however, the absorption school appears to deny the validity of the very basis of the theory of international trade, the doctrine of comparative advantage.

As long as a country's social product can be enhanced by importing certain goods in exchange for others rather than by producing them at home, any measures that serve to increase trade with the rest of the world must, by raising total output, *also make it possible to set aside part of this increase in production for improving the balance on current account*. The country may then still have *more goods and services left over for domestic use* than before. Depreciation of an overvalued currency frequently has precisely this effect, an increase of trade in *both* directions. Even if exports and imports do not both increase simultaneously, the removal of import controls after depreciation may improve the allocation of resources sufficiently to have all the consequences described here. This conclusion strikes at the very heart of the absorption theory.

The argument just given, undoubtedly the most devastating one

against the use of national-income aggregates in analyzing the subtler issues of international trade and finance, did not rest on any special assumptions concerning the reaction of the terms of trade to depreciation. An increase in a country's real income through the operation of the principle of comparative advantage is not only perfectly compatible with a deterioration of its terms of trade, but the latter is, in fact, in most cases a necessary prerequisite for it. The terms of trade always tend to worsen the more intensively a country engages in foreign trade; on the other hand, they are maximized when a country is infinitely close to autarky. If autarky is recognized as an undesirable policy objective, no particular value can be attached to holding the terms of trade as high as possible.

Contrary to what we have just concluded, economists have for a long time spoken of a worsening of the terms of trade as a necessary "secondary burden" of depreciation that would have to be added to the "primary burden" imposed by the (supposedly inevitable) cut in domestic absorption. Small wonder that, as long as these misconceptions persist, devaluation appears to many people as a sacrifice hardly worth taking.

The absorption approach in its simplest version also overlooks the possibility that the terms of trade may *improve* after depreciation. Such an improvement is, of course, not compatible with an expansion of a country's foreign trade, but requires the operation of different mechanisms. As an illustration, we shall give a numerical example of an extreme case.³ Let us assume that two countries trade with each other and that each of them can export only one rigidly fixed quantity of its export commodity. For the purpose of aiding the reader's imagination, we shall call the two countries "America" and "Britain" and their respective export commodities "Bourbon" and "Scotch." For convenience, suppose that the prices of the two beverages are initially \$1 and £1 per bottle. We shall also assume that the exchange rate between dollar and pound is set at unity to begin with. Each of the two countries exports one million bottles per year; the values of exports and imports are exactly in balance.

America now devalues the dollar by 50 per cent. Given any arbitrary structure of the demand for imports in each country,⁴ the prices of Bourbon and Scotch will remain unchanged in terms of the currency of the respective import country, for we have assumed that the quantities offered (and hence, with full market equilibrium, the quantities

³ This example is intended to serve a purely pedagogical purpose. It is not, of course, suggested that its assumptions are anywhere near realistic.

⁴ Perfect inelasticity of demand must be ruled out, however, to assure determinate prices.

sold) remain unchanged. One million bottles of Bourbon will be offered in Britain before as well as after devaluation, and each bottle will continue to sell for £1. Likewise, the price of Scotch in the United States will remain at \$1 per bottle.

The 50 per cent devaluation by the United States makes one pound equal two dollars. In America, the bottle price of Bourbon will consequently have risen to \$2 while the British price of Scotch will have fallen to 10 shillings.

Computing the terms of trade before and after devaluation (by comparing the prices of Bourbon and Scotch in terms of the *same* currency, let it be remembered), we discover that the terms of trade of the United States, the country that *devalued*, have *improved* by 50 per cent (exactly in proportion to the rate of devaluation). In addition, we note that America's balance on current account has increased from zero to \$1 million (the total value of her exports before devaluation!) while its citizens are not being asked to drink one single bottle of either Bourbon or Scotch less than before.

The main purpose of this example is to show that the improvement of a country's foreign balance following depreciation does not necessarily depend on the extent to which its residents are willing to reduce their absorption of goods and services, *even when no improvements in resource allocation take place*. There is all the less reason to worry if the elimination of currency overvaluation also improves the allocation of resources, as it inevitably will. It may also be pointed out in passing that our example, while unrealistically extreme, had one feature in common with a situation which most people intuitively regard as the worst possible calamity for a devaluing country: the case in which it is unable, owing to its full use of limited productive capacities and inability to reallocate its resources, to increase its export volume.

There is a simple but devastating counter-argument against the once widespread view (especially popular during the decade immediately following World War II) that exchange-rate adjustments are of no use in curing balance-of-payments ills. Were this view correct, it could not make any difference what the level of exchange rates is at any given time. There would be no valid reason not to adopt the very convenient device of setting all exchange rates equal to one. How much could the work of exporters, importers and bank clerks all over the world be simplified if one dollar were equal to one pound, one mark, one franc, and pesos and pesetas of various shapes and sizes! Reflection on the probable consequences of such a step illuminates the essential role of exchange rates and of their variation in all necessary clarity.

d) Resource Allocation Once Again: Exchange Rates and Price-Level Changes

In evaluating the probable success of depreciation, it is always essential to verify whether or not trade restrictions (including exchange controls) have been in effect to protect the country's international reserves. As far as depreciation can act as a substitute for such controls, trade flows may increase in *both* directions. In addition to any other effects that improve the current account, the rise in the volume of trade can hardly fail to raise the social product by improving resource allocation. If no trade restrictions exist, on the other hand, the improvement of the foreign balance will be correspondingly more difficult. For such situations, the absorption thesis contains a grain of truth.

The grain is not, however, likely to be a very sizable one in practice. Well-informed readers know that serious balance-of-payments deficits *unaccompanied* by exchange controls have practically never occurred in *fully employed* economies. In countries without restrictions on external trade and payments, on the other hand, currency overvaluation has inevitably had to be moderated by monetary and fiscal restriction. Stagnation and unemployment then become the principal indicators of overvaluation. The development of the U.S. economy during the past few years is a case in point. If devaluation is undertaken in a state of recession or depression, nobody, including the champions of the absorption approach, has ever denied the possibility of balance-of-payments improvement without sacrifices by the home community.

The analysis of probable price-level changes in response to alterations of exchange rates provides an illuminating application of the principle of comparative advantage. Most people take it as self-evident that currency depreciation must always have an inflationary effect. The internal prices of internationally traded commodities (both exports and imports), one is tempted to argue, can only differ by the amount of tariffs and transport costs from their foreign prices, multiplied by the unit price of foreign currency. Since depreciation raises this latter factor, its inflationary impact on domestic prices appears assured.

This reasoning is entirely correct under competitive conditions when foreign trade is completely free. Wherever trade and payments are impeded by controls, on the other hand, there is no necessary proportionality between foreign and domestic prices of any commodities. Tariffs and quotas always raise the domestic prices of the protected goods, whether controls are imposed to meet balance-of-payments difficulties or for any other reason. If depreciation puts an end to these difficulties and allows the removal of certain trade impediments, domestic prices of all "liberalized" commodities tend to fall.

Inflationary pressure will build up in the export industries, however, for depreciation inevitably tends to raise prices there. A clear answer as to which of these forces, the deflationary impact of import liberalization or of price increases in the export sector, will win out, seems to be precluded.

The basic principles of classical international trade theory score an easy if somewhat unexpected victory in this matter. It can be shown⁵ that the over-all effect of depreciation and the simultaneous removal of import controls may quite plausibly exert downward pressure on the price level if the improvement in the allocation of resources made possible by the latter goes far enough. Only this effect can explain why, to the puzzlement of many observers, depreciation has frequently not had the inflationary impact they expected. It may be added that this mechanism does not require a fall of the prices of export goods in terms of the currencies of the *exporting* countries. Admittedly, this would be a more difficult feat to achieve. The chain of events sketched here will always be accompanied by an *increase* of these prices.

e) Exchange Rates and Employment⁶

Where currency overvaluation has, among other things, resulted in stagnation and unemployment, the feasibility of improving the balance on current account through depreciation is universally recognized. The implied corollary is sometimes forgotten: *depreciation is one of the most effective means of increasing employment*. Depreciation must always alleviate a recession, even in cases in which its positive effect on the balance of payments is (in pure theory) open to dispute. The increase in employment following depreciation is, moreover, not limited to its *direct* effect on the quantities of exports and imports and the general lift thus given to the economy. Employment can be further boosted by deliberately expansionary monetary and fiscal policies. Under conditions of convertibility, *only* depreciation of an overvalued currency renders such policies feasible.

As a purely theoretical proposition, an exchange-rate adjustment is equivalent to a proportional change of all prices in one country at fixed exchange rates (strictly speaking, a change only of the prices of those goods which actually or potentially enter international trade would suffice). The necessity for devaluation could be avoided if a country succeeded in reducing domestic prices in the same proportion.

The impact of these alternative choices on employment nevertheless

⁵ The details of the proof are, unfortunately, somewhat too complex to be presented here. The reader is referred to Chapter VI of my *Flexible Exchange Rates*.

⁶ The reader's attention is also called to section 4. c) below, where the vastly different leverage of monetary policy as a countercyclical tool under different exchange-rate regimes is further explored.

makes them profoundly different policies. The only method of bringing prices down (in economies in which not all prices are determined by government fiat) is to apply monetary and fiscal restriction. Most prices are notoriously sticky. Their downward movement will normally be accompanied by a substantial and prolonged recession. The differences in price flexibility between sectors (depending largely on the degree of competition prevailing in each of them) will, furthermore, entail considerable distortions in the price structure and the pattern of production.

By contrast, the restoration of equilibrium price ratios between the home economy and the rest of the world through depreciation of an overvalued currency has an *expansionary* effect. In the real world, it is therefore a vastly less painful alternative.

Since the advent of the "Keynesian revolution" during the 1930's, economists have for the most part disregarded the employment effect of exchange-rate adjustment. Although Keynes himself had throughout his life been one of the world's foremost experts both on the theoretical and the practical aspects of the foreign exchanges, the profound impact of the *General Theory of Employment, Interest and Money* (1936) left monetary and fiscal policies (and for a long time almost exclusively the latter) as the only feasible and legitimate means of assuring full employment in the eyes of most economists. Anybody who is familiar with Keynes' valiant battle against the tragic decision of the British government in the early 1920's to return to the prewar gold parity of the pound sterling and thus to engineer a substantial overvaluation, with all its disastrous consequences on British economic and political life, must be surprised by the almost complete neglect of the exchange-rate issue in his major work.⁷ Depreciation as a means of securing full employment has long been flatly rejected by most of Keynes' disciples as a "beggar-my-neighbor policy" that would, if undertaken by one country, be followed by others in any case and could not really bring relief to the world at large.

The image of competitive depreciation is taken from the great depression. A worldwide depression is by no means the only situation in which underemployment poses a problem for policy. All during the 1920's, Britain experienced the highest rates of unemployment in the whole world because the pound sterling was overvalued with

⁷ It is of great interest, however, to remember a few passing remarks on our theme in the *General Theory*. On page 270, Keynes expresses the opinion that "the maintenance of a stable general level of money-wages is . . . the most advisable policy for a closed system; whilst the same conclusion will hold for an open system, *provided that equilibrium with the rest of the world can be secured by means of fluctuating exchanges*" (italics added). On page 339, "the technique of bank rate coupled with a rigid parity of the foreign exchanges" is called "the most dangerous technique for the maintenance of equilibrium which can possibly be imagined."

respect to almost any other currency. The United States, in particular, was booming in the 1920's. Depreciation of the pound would not only have been the most logical, but also the *only feasible* way of curing the painful stagnation of the British economy. "Keynesian" methods of monetary and fiscal policy were ruled out for balance-of-payments reasons as long as neither convertibility nor the par value of the pound were to be abandoned. This is all too frequently forgotten by latter-day disciples of the Keynes of 1936.

Let me take this occasion to remind the reader once more of the nature of exchange rates as exchange *ratios*. Overvaluation is not an absolute, but a relative attribute of one currency with respect to others. These other currencies must then, *by definition*, be undervalued. It follows that depreciation of the former with respect to the latter is a feasible method of restoring equilibrium. It is simply impossible for *all* the world's currencies to be simultaneously overvalued.

The United States has for several years found itself in a situation very similar to that of Britain during the 1920's. Too many pronouncements on the dollar glut have dwelt exclusively on the balance of payments and proclaimed that everything was again in perfect order whenever America happened not to lose gold for a few months. It cannot be emphasized strongly enough that the dollar parity also has something to do with the highly unsatisfactory employment situation in the United States, and that this may well be the more crucial aspect of currency overvaluation.

In conclusion, let it be added that the bad reputation of a "beggar-my-neighbor policy" which depreciation has retained from the 'thirties is not even justified on the basis of that episode. Only if every increase of a depreciating country's real national income had been accompanied by an equivalent fall of the social products of other countries would depreciation not have been a gain to the world at large. Closer inspection shows that those countries that let their currencies depreciate during the great depression have, on the whole, seen the volume of their imports increase just as much as their export volume. The charge that they increased their business activity at the expense of even greater depression in other countries is, by and large, unjustified. In most instances in which exchange rates were freed, this measure was followed by expansionary domestic policies. Unless prevented by a tightening of import controls, domestic expansion always spills over into other countries.

"Keynesian" monetary and fiscal policies to expand employment *without* depreciation in a country with an overvalued currency, on the other hand, almost inevitably make stringent import and payments controls necessary. Limited gold and foreign-exchange reserves do not

allow any country to let its foreign balance develop very differently from the manner in which it would evolve *with* depreciation. The impact on employment in the rest of the world must therefore necessarily be very similar, except to the extent that depreciation makes the terms of trade of depreciating countries worsen. The effect on the allocation of the world's resources, however, is certain to be adverse when growing balance-of-payments difficulties at rigid par values force a closer approach to autarky on all countries with overvalued currencies.

These conclusions are supported by the empirical evidence from the great depression. Table 4 shows that both the volume of exports

TABLE 4		
PERCENTAGE CHANGES OF QUANTITY INDICES OF EXPORTS AND IMPORTS OF COUNTRY GROUPS, 1930 TO 1934		
	<i>Exports</i>	<i>Imports</i>
Gold Block	-28	-23
Countries with Pegged Exchange Rates and Exchange Controls	-40	-21
Countries with Fluctuating Exchange Rates	-12	- 7

Source: S. E. Harris, *Exchange Depreciation*, Cambridge, Mass.: Harvard University Press, 1936, p. 101.

and of imports of countries with depreciated, fluctuating exchange rates fell substantially less than the volume of trade of countries that maintained their exchange rates, whether the latter chose to remain on the gold standard with full currency convertibility or whether they decided to pursue expansionary policies behind a barrier of stringent controls over foreign trade. The original intentions of policymakers in the various countries that chose to devalue may not, of course, always have been so praiseworthy and desirable from the point of view of the world at large as the actual consequences of their actions turned out to be.

Another point worth stressing is that other countries will benefit more from a move toward *flexible* rates than from mere depreciation to a new peg. The balance-of-payments barrier will with certainty no longer stand in the way of active full-employment policies in the former case, but may well continue to act as a drag on public policy in the latter, either in the devaluing country (if the rate of devaluation turns out to have been too small) or elsewhere.

It is true that a simultaneous increase of employment in all countries could have been achieved during the great depression without exchange-rate adjustments by coordinated expansionary policies everywhere. But this was not a feasible proposition at a time when the nature

of the depression was almost universally misunderstood and full co-ordination of national policies was an even less realistic proposition than it is today. The severity of the depression varied considerably from country to country, moreover. Coordinated expansion at constant par values and full convertibility would have left some economies seriously depressed at a time when others would already have enjoyed an inflationary boom.

4. *Capital Movements*

a) A Few Formal Relationships

In order not to lose sight of the essentials, it is advisable to keep a few basic relations firmly in mind. A net capital movement into or out of a country implies that the net indebtedness of its residents toward the world at large (or their net claims on the rest of the world, respectively) has changed. If, in order not to make things unnecessarily complicated at the beginning, we assume that no private or governmental gifts are being made, a country's net claims on other countries can only have risen (an instance in which we speak of a "capital outflow") if its residents have supplied other countries with goods and services of greater value than what they themselves have received in exchange. In other words, a net capital outflow during a certain period implies that the country has achieved a surplus on current account of equal value. This is seen from inspection of the balance of payments in Table 3 above.

An increase of a country's claims on the rest of the world may, however, take two very different forms. Things are simple if the country's residents are willing to acquire foreign assets amounting to the full value of the export surplus. If the authorities (including the central bank) abstain completely from all intervention in the exchange markets, this must necessarily happen.

Central banks do not now behave in a way that would make this outcome possible. As long as they purchase and sell foreign exchange as a matter of daily routine, part of an export surplus during a given period may take the form of an increase in their holdings of foreign exchange (i.e., of their deposits in foreign banks). Only the remainder constitutes a "capital outflow" in the more narrow sense of the term, i.e., a capital transfer voluntarily undertaken by the country's banks, businesses or private individuals. Changes in a central bank's holdings of foreign exchange (and gold) may, as is only too well known, often assume sizable proportions. Let us remember that all member countries of the International Monetary Fund that have declared "par values" for their currencies are obliged to intervene by purchases or sales of

foreign currencies whenever exchange rates move (at most) to a quotation 1 per cent above or below the established par values.

It is also imaginable, of course, that the current account is roughly in balance while voluntary private capital movements and "compensatory official financing" (the central bank's exchange-market operations) compensate for each other. This may occur, for example, because many people expect an imminent depreciation of their currency while the central bank is bound to support its rating on the exchange markets as long as it has not announced an official parity change. Private and official gifts between countries introduce a further discrepancy between the export surplus and voluntary capital movements. If a government decides to make grants to other countries, a positive balance on current account can arise without an equivalent increase either of private claims on the rest of the world or of official holdings of foreign exchange.

b) Motivation of Capital Movements

In economies dominated by private enterprise, international movements of capital will, just as any other transactions, presumably be guided by the profit motive. Because investment abroad appears more lucrative than investment at home, American companies may decide to set up foreign subsidiaries or to enlarge existing plants owned by them. They will normally have to acquire certain amounts of foreign currencies at some stage in the process. Private individuals or institutional investors may take a more optimistic view of the growth potential of foreign companies and place orders to purchase their stock. The interest return on foreign bonds may be higher than on comparable domestic securities; if the rating of foreign currency on the exchange markets over the longer run is not in doubt, investors may prefer to take advantage of the higher earnings abroad. All this gives rise to an additional demand for foreign exchange in the amount of the investment.

Finally, some people may have the impression that their home currency will depreciate. To avoid all exchange risk, they may transfer their holdings of liquid funds into assets denominated in "stronger" foreign currencies. Most people look upon currency speculation of this kind with a jaundiced eye. However much successful businessmen in other fields may be admired for their ability to exploit profitable opportunities, people who expect to gain a few per cent (or to avoid a loss) from a change in the official parity of their currency invariably find their patriotism and their integrity questioned, notwithstanding the fact that many of them may be in the position of trustees whom law and conscience expect to take the greatest possible care to avoid losses to the values entrusted to them.

“Gresham’s law” is a term familiar to all economists. They enjoy telling elementary classes how a system known as “bimetallism” inevitably had to end in failure. Under this arrangement, both gold and silver coins circulated simultaneously while the exchange ratio between them was fixed by law. Apart from their use for coinage, both gold and silver have, however, always had other uses for which they were bought and sold at free market prices. Whenever the official exchange ratio made gold too cheap relative to silver by comparison with their prices on the free market, an incentive was created to acquire all the gold coins one could get hold of, melt them down and sell the metal at the higher market price. Only silver coins, whose relative value in terms of gold was overstated by the official exchange ratio, would be left in circulation. “Bad (overvalued) currency drives out the good—” this is the essence of Gresham’s law.

It is a simple matter to apply Gresham’s law to modern paper currencies. When currencies are freely convertible into each other and exchange ratios between them are fixed, bad currency will drive out the good just as inevitably as it did in the historical instances when bimetallism has broken down. Nobody will want to hold currencies whose value is obviously below their stated market prices in terms of other currencies, as revealed by the fact that they are in excess supply over an extended period. In some respects, the modern practice of pegging exchange rates may be more definitely unworkable than bimetallism because the exchange of one currency for another is now simpler and much less costly than the process of melting down coins and selling the metal on the market. A much smaller degree of disequilibrium may therefore suffice to make the system break down unless currency conversion is prevented by brute force.

c) Effects of Capital Movements

By increasing the supply of the currency from which they move away, capital flows tend to cause depreciation of that currency. Depending on the exchange-rate regime, capital movements have one of two radically different consequences.

Whenever the central bank does not intervene in the exchange markets (either because exchange rates are not being supported at all, or because they happen to be moving somewhere between the margins of fluctuation at which the central bank begins its stabilizing operations), the rating of the currency from which capital is moving away will be depressed on the exchange markets to the point at which all of it is absorbed by commercial importers in foreign countries. Unless there is a basic change in the willingness of the public and of commercial banks to hold foreign exchange, there are no other recipients to

which the funds newly offered on the exchange markets could flow. It may, of course, take some time before all of the new offer of domestic currency actually reaches commercial traders. Some of it may temporarily disappear in the banking system or in the hands of speculators. As long as this happens, *no* capital export has yet taken place for the economy as a whole. The reader is again invited to turn to the balance of payments in Table 3 above to verify this proposition.

In the *absence* of central-bank intervention, a *capital export thus necessarily generates additional exports of goods and services of the same value*. The capital-exporting country's currency will depreciate exactly to the level that makes this possible.

If the transferred funds are absorbed by a central bank, on the other hand, a result that necessarily follows whenever the exchange rate has attained one of the points of intervention, no change in the current account is provoked directly. These funds do not enter the general exchange market; the constancy of the exchange rate assures that no new commodity movement is induced by the flow of capital.

These differences are of profound significance for monetary policy. Given full currency convertibility, an increase in the interest differential between two financial centers immediately provokes a flow of capital toward the country with the rising interest-rate structure. If exchange rates fluctuate freely—if central banks do not intervene on the exchange markets—the process described above will transform the capital movement into a flow of commodities of the same value and in the same direction.

This is precisely what ought to happen when a change in monetary policy occurs. A central bank normally raises interest rates to counter inflationary tendencies. If one of the results of this move is an inflow of capital which becomes almost immediately transformed into higher imports, the efforts of the central bank are materially strengthened: the effective supply of commodities on the domestic market rises and serves to reduce inflationary pressure. The new imports, it is worth emphasizing, enter the country at reduced prices, for domestic currency has appreciated as a result of the inflow of capital. This is one of the very rare instances when a policy measure can immediately bring the general price level down.

The same argument holds, with signs reversed, for a recession. When the central bank adopts expansionary measures, capital flows out in the pursuit of higher interest earnings abroad. An export surplus is generated that will strongly reinforce expansion at home. In most cases, it will not even be necessary for the authorities to take deliberate policy action. If a decline in aggregate demand develops from a state of full employment, interest rates automatically tend to fall and bring

the expansionary foreign-trade effect on domestic employment into operation.

By contrast, monetary policy is materially weakened or rendered entirely impotent when exchange rates are not free to move. Not only is the mechanism generating export and import surpluses at the appropriate time not operative; the monetary effects of capital movements run *directly counter* to the intentions of central bankers. A rise in interest rates induces a capital inflow in this case as well (provided that the currency was not seriously overvalued to begin with, for a tightening of credit may then not be sufficient to overcompensate for a general anticipation of devaluation). The absorption of the capital movement by the central bank, however, brings about an *increase* in the money supply (a multiplied increase in a system of fractional reserve banking) at a time when the central bank, by raising interest rates, obviously wants to follow a policy of monetary restriction.

The working of this process had been entirely forgotten during the many years when most currencies were inconvertible. It asserted itself with renewed vigor, to the bewilderment of many economists and central bankers, after a number of important countries reintroduced currency convertibility for non-residents at the end of 1958. The moral of the story is, as we have now had ample opportunity to observe, that independent national monetary policies become all but impossible when exchange rates are fixed and currencies are made convertible. Each currency finds itself in a certain state of over- or undervaluation at the dawn of convertibility; the accompanying state of stagnation or excess demand, respectively, their extent depending on the degree of exchange-rate maladjustment, will develop immediately. A country such as West Germany, whose currency happened to be undervalued in the late 'fifties, finds itself in a state of excessive demand, at least as long as its export prices have not yet caught up with those in the rest of the world. Those unfortunate countries whose export prices are, on the whole, above those of most competitors, as they happened to be in the United States and the United Kingdom, will have no choice but to resign themselves to a certain degree of stagnation. Their stagnation will not end before the gap between their own export prices and those of other countries has narrowed sufficiently, either because of price increases elsewhere or a fall of their own prices.

Any attempt by the stagnating countries to force events by the adoption of expansionary policies is quickly defeated by the inevitable deterioration in their balances on current account, the capital outflow which soon follows when it becomes apparent that currency overvaluation is being accentuated, and the monetary contraction all this will make inevitable—unless a stagnating country decides either to re-

nounce currency convertibility or to devalue. It is still almost universally overlooked that expansionary monetary and fiscal policies by the stagnating countries will not only fail to work in a system of fixed exchange rates and full convertibility, but may under this system actually make a recession *worse* in the long run. As soon as a state of currency overvaluation is generally recognized, speculative capital tends to move out. The monetary contraction which then becomes necessary to counter speculative expectations has to go farther than it would have to merely to correct the unfavorable trend in the balance on current account. The net result is likely to be a more pronounced business recession.

Readers may be troubled by one feature of our analysis of capital movements under fluctuating exchange rates. We have assumed that a rise of interest rates will attract capital to a country. This will not occur, one might object, if it is generally expected that a currency is going to depreciate. The point is well taken, but it does not affect our conclusions. A rise of interest rates can, by itself, surely not *strengthen* a general impression that a currency will depreciate. If this impression had obtained and capital was therefore flowing out, monetary restriction must, at the very least, serve to *reduce* the capital outflow. With freely fluctuating exchanges, this cannot have any other effect but to dampen inflationary pressure, as compared to what it would have been otherwise. The same holds, with signs reversed, for the case of a decline of domestic interest rates.

5. *Forward-Exchange Markets*

Of all topics connected with the foreign exchanges, forward exchange markets have a reputation of being among the most difficult to understand. The principal reason is undoubtedly the highly abstract nature of forward contracts. The widespread tendency to regard forward-exchange markets as a rather esoteric field of study, of interest only to a few narrow banking specialists but not to the general economist, prompts me to call the reader's special attention to the following pages. Without a full understanding of the functioning of forward markets, all discussion of exchange-rate policy must remain seriously deficient.

a) Commercial Trade and the Forward-Exchange Market

One of the most important services rendered by all futures markets is the opportunity they afford commercial traders to relieve themselves of all risks of price changes. By purchasing wheat futures, a miller is enabled to enter into long-term sales contracts for flour without running the risk that a sudden rise in wheat prices wipes out all profits of his

milling operations, the main object of his business. Similarly, an exporter of machinery whose sales terms specify payment in foreign currency in half a year's time, may relieve himself of the risk of currency depreciation by forward sales of the expected sales proceeds at an exchange rate known precisely now.

Apart from transactions arising out of commercial trade, the forward market can also serve as a vehicle for purely speculative operations. Whoever expects that the rating of a certain currency on the spot exchange market three months from today will be sufficiently below the present quotation for three months' forward exchange, may feel induced to enter a contract for forward sale in the expectation of realizing a gain by covering himself shortly before his forward contract matures.

The vast majority of international commercial transactions are not cash-and-carry deals. Payment is in almost all cases not made immediately, but is deferred three or more months from the date at which a contract is concluded, or even much longer. For all these transactions, the actual spot rate is without significance; it is of interest only as an approximate indicator of what the spot exchange rate is likely to be when payment is made. As long as movements of exchange rates appear possible, cautious exporters and importers will hedge on forward markets of the appropriate maturities. It is not generally realized that commercial exporters and importers who do not want to assume a speculative foreign-exchange risk *do not come into contact with the spot exchange markets at all. Only forward markets* are intrinsically of interest to the majority of foreign traders. Under normal conditions, the spot exchange market ought to be merely a pool from which the operations of speculators and interest arbitrageurs (whose activities will be described below) are fed. In fact, as far as the forward sales of commercial exporters find their counterpart in forward purchases of the same currency by importers, forward contracts are "married" to each other and the spot market is entirely unaffected, not even indirectly.

When it is said that stable exchange rates are a powerful stimulant for active international trade, it is almost always forgotten that it is mostly stability of *forward* rates which really matters. Failure to recognize this has prompted central banks to concentrate almost exclusively on the pegging of spot rates while the stabilization of forward rates has usually been refused on the grounds that it would only serve to facilitate the (presumably undesirable) activities of professional speculators. It also explains the stipulation in the *Articles of Agreement* of the International Monetary Fund that spot rates have to be held within narrow limits while no such prescription exists for forward rates (Article IV). If, contrary to what we have concluded, forward-exchange

markets are so little developed today, this is only due to the fact that spot exchange rates are pegged and commercial traders believe, rightly or (sometimes) wrongly, that they are going to remain stable. Only when this practice is abandoned can forward markets fully come into their own. It is therefore not permissible to argue on the basis of their present breadth and depth that forward-exchange markets could not offer enough protection to commercial traders if exchange rates were liberated.

It is also incorrect to argue that forward cover, while it permits a trader to relieve himself of the exchange risk, involves additional expense, and that fluctuating exchange rates will therefore nevertheless discourage trade. As we shall see, the "insurance premium" of a substantial forward discount or premium (beyond the level dictated by an interest differential between the home economy and other countries, a phenomenon described in the following section) arises only when (spot) exchange rates are *pegged* and the preservation of the par value of a currency is in doubt. Really significant differences between spot and forward rates will only be possible when currencies are not fully convertible (or when there is voluntary collusion between banks in different countries to prevent full freedom of short-term capital movements). Otherwise, interest arbitrage will always, up to the natural differences created by divergences between short-term interest rates, tend to keep spot and forward rates close together.

b) Arbitrage Transactions

If the three-month forward rate for a certain currency were, say, one per cent above the spot rate, it would seem that perfectly riskless arbitrage profits can be secured. Anyone with a million dollars to spare could place them in a bank in the foreign country and simultaneously sell the same amount forward. Since both spot and forward rates are known with certainty at any moment, he appears to be assured of an easy and safe profit of \$10,000 on the transaction (except for the small bank charges for the double currency conversion). Since no exchange risks are involved, the arbitrageur could just as well acquire the million dollars (or more) by borrowing. All arbitrage transactions of this kind bring prices in the two markets closer together, and competition between arbitrageurs tends to reduce profits to zero.

One factor may, however, make the deal unattractive: interest rates in the country whose currency happens to enjoy a forward premium may be so much lower than elsewhere that arbitrage of the kind described offers no advantage. It is easily seen that if, in the example above, the level of short-term interest rates is 4 per cent *per annum* lower in the country with the forward premium, all apparent gain

from forward-exchange arbitrage becomes illusory. Put differently, equivalence between forward premia and short-term interest differentials for the same period is an equilibrium condition which ensures that temporary, "covered" capital transfers of the type described do not yield any profits. These transfers are known as "interest arbitrage" or, more exactly, "covered interest arbitrage" since all exchange risks are avoided by the simultaneous spot purchase and forward sale of foreign exchange.

It is readily seen that interest arbitrage is a powerful stabilizing factor for exchange rates of all maturities whenever forward markets are active and well developed. If it should happen that substantial excess supply suddenly arises in, say, the 3-month forward market for a given currency, so that the forward rate for this maturity tends to depreciate very abruptly, it will immediately become profitable to purchase the currency for this maturity and simultaneously sell it on the spot market as well as on the forward markets for six, nine and twelve months as well as for any other maturities for which a forward market exists. The same holds, of course, if the tendency toward depreciation arises on the spot market. Unless divergent monetary policies in the countries concerned cause a general weakness of the currency in question, in which case it will simultaneously depreciate on *all* markets, a temporary excess supply in one forward market must remain an isolated phenomenon that is bridged by arbitrage between this market and all others.

On repeated occasions, we have made use of the consequences of changes in monetary policy for international capital movements. Our description can now be completed in one essential respect. As long as all capital movements stimulated by an increase (say) in domestic interest rates take the form of *covered* interest arbitrage, the capital inflow on the spot exchange market (and possibly the closer forward markets) will be accompanied by an opposite change on the forward markets for longer maturities. Since it is generally to be expected that commercial traders use the exchange market of the maturity that coincides most closely with the delivery date of the commodities they deal in, the increased offer of goods in the period immediately following the change in monetary policy is accompanied by a reduction of the aggregate supply of commodities in the more distant future. The action of the monetary authorities has the appropriate countercyclical effect by making the country "borrow resources" from the rest of the world.

It would be incorrect, however, to expect compounded inflationary pressure in the later periods for which interest arbitrageurs have covered forward. As long as nothing further changes and interest rates at home and abroad remain at the level attained after the domestic

tightening of credit, interest arbitrage will continue to operate in the same direction, i.e., it will move spot funds into the country with higher interest rates. The effect of these flows can be expected to compensate for the flows in the opposite direction that have been "inherited" from the past. The "repayment" of the borrowed resources to the outside world is thus postponed further into the future.

Another point is worth making. The almost universal practice of central banks of pegging spot rates and letting forward rates fluctuate freely serves to accentuate losses of gold and foreign-exchange reserves. There need not be any speculation to make forward rates depreciate, as our discussion should have made amply clear. A gradual rise in one country's export prices at a rate exceeding that in rival countries may first make forward rates for its currency depreciate. The profitability, when spot exchange rates are pegged, of simultaneous spot sales and forward purchases of this currency by interest arbitrageurs suffices to deplete the country's foreign-exchange reserves at an increasingly rapid rate. As long as the unfavorable trend in the country's export prices is not reversed, it will not help very much if the central bank, as some economists have been advocating, begins to peg forward as well as spot rates. The authorities would in this case commit themselves to deliver ever larger amounts of foreign exchange at future dates; they would thus encourage even greater import surpluses in subsequent periods. The inevitable awakening to the fact that they have been squandering their international reserves is only postponed; the subsequent hangover will be all the more painful.

There are only two honest alternatives for safeguarding a country's international reserves in such a situation. The first is for the authorities to reverse the deterioration in the competitive position of the export industries by sufficiently determined policies; more concretely, they may apply monetary and fiscal restriction as well as measures to strengthen competition in order to stifle inflation. Such policies, if applied with the necessary vigor, prevent forward rates from "running away" and will thus remove pressure on spot rates and (if spot exchange rates are being stabilized) on the central bank's foreign-exchange reserves. The second alternative is to let both spot and forward rates fluctuate freely. There is no valid reason why these alternatives should mutually exclude each other. There is every reason, in fact, why they ought to be applied together.

IV. International Monetary Standards

1. *Currency Systems of the Gold-Standard Type*

We shall now investigate the behavior of a system in which all currency *parities* are eternally immutable (or are, at any rate, believed by everybody to possess that property), although *exchange rates* may be allowed to fluctuate freely between narrow limits around these parities. We shall classify all systems of this type under the heading "gold standard" because, as long as it lasted, these conditions were most nearly fulfilled under this arrangement. It should be emphasized at the outset, however, that the presence of actual gold flows is entirely irrelevant to the working of a system as defined above. All that matters is that the authorities at all times pursue the policies required to assure eternal stability of par values at full convertibility.

a) The Pure Gold Standard

The pure gold standard requires central banks of all participating countries to fix the price of gold in terms of their own currencies by a standing offer to buy and sell unlimited quantities of gold at that price (allowing for a small markup). The commitment to buy and sell gold at fixed prices implies that exchange rates never deviate from the ratio of gold prices in any two currencies by more than a small margin. This margin is determined by the cost of shipping gold between the two countries. For if the currency of one country depreciated by more than a small fraction of its par value, this country would become the cheapest source of gold in terms of any other currency. Arbitrageurs would immediately begin to buy gold in large quantities for the purpose of selling it to other central banks at a profit. Since this operation does not involve any risk, it can be undertaken on an enormous scale. As a consequence, the degree of depreciation is always narrowly limited.

The same holds for exchange-rate movements in the reverse direction, for depreciation of one currency is equivalent to appreciation of others. Since the limits thus created for exchange-rate variations are due to gold movements, they are known as the "gold export" and "gold import" points, respectively.

Most textbooks stress the automaticity of monetary expansion and contraction as gold moves from one country to the other. If the operation of the gold standard is in the hands of central banks, no recourse to any such automatism is necessary to explain its functions. The appropriate policies will always be forced upon the central bank losing gold for the simple reason that there is inevitably a minimum—zero—

below which it cannot allow its gold reserve to fall. As soon as the exchange rate has attained the gold export point and gold begins to flow out, the central bank will, unless it wants to see its gold reserve shrink to zero within a very short time, immediately have to take measures to reverse the movement of gold, and thus of exchange rates, by increasing demand for its own currency.

It is worth emphasizing that countries on the gold standard did not take the initiative in intervening on the exchange markets. They limited themselves to the application of monetary restriction whenever the movement of exchange rates called for it. Exchange rates were thus, strictly speaking, always determined in a free market. When the decision to raise interest rates has been made at a time of gold outflow, events take the following course. Higher interest rates have the immediate consequence of stimulating the inflow of short-term capital. Over the longer run, they restrain domestic demand (including the demand for imports), put pressure on prices and induce businesses to increase their efforts to export. All this has the effect of boosting demand for the country's currency and thus of forcing the exchange rate away from the gold export point.

It is of secondary importance that gold is the commodity whose price is being fixed and for which the central bank announces a standing offer to buy and sell unlimited quantities. Instead of having a *gold* standard, central banks could just as well introduce a shoe, ship, or sealing-wax standard by fixing the price of any one of these commodities and pledging themselves to purchase and sell unlimited amounts of them from and to the public. As in the case of gold, central banks could not afford to let their stocks of the "reserve commodity" fall to zero as long as they remain committed to deliver unlimited quantities of it on demand; they would have to adopt restrictive measures as soon as the exchange rate reaches the shoe, ship, or sealing-wax export point.

A few differences worth pointing out exist, however, between the gold standard and an imaginary standard using another commodity. The spread between the minimum and maximum exchange rates between any two currencies would generally be greater under the latter owing to the higher costs of transport of most commodities. Over the long run, there would be a more essential difference. Whereas gold is found only in very few places on the globe and possibilities for expanding its production are rather narrowly limited, the world's capacity for producing most other goods is considerably more expansible. If the prices for such goods were fixed at a sufficiently high level, their production might increase at a substantially faster pace than that of most other commodities. This means that, on the one hand, a shoe or sealing-wax standard would not necessarily have the deflationary bias of a

pure gold standard. On the other hand, an even greater proportion of the world's resources would be devoted to the production of goods that are not needed for their own sake, but only as a rather quaint method of assuring that exchange rates do not move beyond certain margins. The officially established price for the reserve commodity could just as well turn out to be too low, on the other hand, in which case too little of it would be produced and a deflationary bias would be generated.

b) Foreign-Exchange Standards

We have recognized the commitment to buy and sell unlimited quantities of something or other at fixed prices as the essential element of an exchange-rate system of the gold-standard type. A "commodity" comes to mind that seems to possess the quality that it cannot be "produced" at liberty by any single country and which nevertheless has the highly desirable property that its "production" does not use up any scarce resources from the point of view of the world at large. This unique material is foreign exchange.

Foreign-exchange reserves can (unless a government resorts to counterfeiting) only be acquired by a country if it manages to achieve a surplus in its autonomous foreign payments (i.e., in all other components of its balance of payments but "compensatory official financing," the activities of the central bank or other official bodies on the exchange markets). This requires an export surplus or voluntary capital inflows; both presuppose a certain effort to enforce monetary and fiscal discipline.

If buying and selling prices of foreign exchange are fixed by all central banks in terms of their own currencies, and if each central bank pledges itself to purchase as well as sell unlimited quantities of foreign exchange at these prices, the result is, from the point of view of any single country, indistinguishable from the gold standard. There is again a lower limit—zero—below which foreign-exchange reserves cannot fall. In order to prevent their total exhaustion, individual governments are, as long as full convertibility is guaranteed (and this is what is implied by the offer to buy or sell any amount of foreign exchange), forced to apply the same rigorous standards of policy as under the gold standard.

This cannot be emphasized too strongly. The gold standard is frequently denounced because it forced every country to move precisely in step with business cycles in the rest of the world, no matter how severe a downturn of activity on the one hand, inflationary exuberance on the other, may have been. At the same time, the present world monetary system is often praised as a means of preserving stability of

exchange rates. As we have shown above, the same policies are forced on the participating countries in the two cases as long as currencies are convertible and the constancy of currency parities is maintained. Only to the extent that the permissible boundaries of fluctuation are now wider than they used to be, on the average, under the gold standard is there somewhat wider scope for active countercyclical policies.

There is one very important reason why an international reserve system with truly pegged currency parities, whether the reserves consist of gold, foreign exchange or anything else, is certain to be much more painful today than during the time when the gold standard was in vogue. The growth of mammoth corporations, more refined methods of gentlemanly collusion and the emergence of giant labor unions have made most commodity and labor markets substantially less "perfect" in many countries than they have ever been. The consequence is a much greater stickiness of prices and wages and even a frequent tendency of both to *rise* against all normal market reactions at a time of excess supply. With a smaller degree of price flexibility, movements of real output and employment are bound to be larger. Whenever a country's foreign balance deteriorates as a consequence of a more rapid increase, or less rapid fall, of its own export prices relative to those in the rest of the world, its central bank will, if exchange rates are to remain constant, have to adopt restrictive measures, irrespective of the reason for the divergent behavior of its domestic prices. Cost-push inflation must under these conditions have a particularly unfavorable impact on the state of business conditions in the afflicted country. This is the only convincing diagnosis of the state of the United States economy during the past few years.

Once the public wakes up to what is happening, increasing pressure will arise to devalue the currency in order to restore a satisfactory level of employment. As soon as the continuity of exchange rates is being questioned, however, the basic assumptions of an international reserve system with fixed parities no longer hold. Alternative systems are examined in the following sections.

2. *The "Adjustable Peg"*

a) The Bretton Woods Agreement

The International Monetary Fund was negotiated at a time when the most destructive war in history was at its height. The pressure imposed on all participants by the urgent needs of the war effort must have been tremendous. It is perhaps admirable that the world currency system that evolved from the Bretton Woods conference was not even much less satisfactory than it has turned out to be. It would nevertheless not be far short of a miracle if a system devised under

these circumstances would prove to be viable without amendments in a world so vastly different from that of 1944 as it is today.

Freely fluctuating exchange rates had oscillated chaotically as a result of the chaotic policies of various countries during the 1920's and '30's. Hence—although no really effective constraints could be imposed on member countries to pursue orderly policies at all times, and although the present system is even less capable of functioning properly if they do not—one did not want to let exchange rates fluctuate freely.

The gold standard had, as long as it lasted, prevented wild movements of exchange rates, but had then torn the whole world into the whirlpool of the great depression before it finally collapsed ignominiously. Consequently, one wanted to avert the risk that one major country in depression would, through the close linkage of all currencies provided by the gold-standard mechanism, again force all other economies down with it. This was supposed to be achieved by conceding the possibility of discontinuous exchange-rate adjustments in the event of a “fundamental disequilibrium.”

At the same time, such adjustments should no longer be undertaken by each country as the spirit moves it, the method that had been practiced during the 1930's. Parity changes would henceforth be undertaken in an “orderly” fashion by mutual agreement after careful consideration by an international body.

The economists, bankers, and civil servants meeting at Bretton Woods could not possibly have foreseen how this system, an entirely novel arrangement, was going to fare. It is deplorable that they did not provide for more flexible statutes that could have been adjusted as one gathered experience. While one tried to avoid the various disadvantages of earlier monetary arrangements, most of the advantages of each of these systems were avoided as well.

In making it possible to adjust exchange rates, so as to escape the merciless discipline of the gold standard, true stability of exchange rates was abandoned. It cannot be emphasized strongly enough that the Bretton Woods agreement does *not* guarantee stability of exchange rates, for this assertion continues to be a standard argument of many of its proponents. None of the considerable advantages of long-run stability of exchange rates can be claimed for the present system. The fact that parity changes are only undertaken at rather infrequent intervals cannot serve as a valid counterargument. It only means, first of all, that adjustments will have to be all the larger when they do happen. What is even more damaging to international trade and payments is the creation of prolonged periods of uncertainty when no one, heads of governments and central banks not excepted, can know if, when, and by how much exchange rates may be changed. It is not

logically permissible to condemn freely fluctuating exchange rates on the grounds that their alleged instability would reduce the volume of international trade and capital movements and simultaneously to praise the possibility of par-value changes as an important advantage over the gold standard. The very notion of a "fundamental disequilibrium" that is to serve as the criterion whether or not a par value should be changed is entirely devoid of practical applicability. It is impossible to deny that the international monetary system devised at Bretton Woods has created a great deal more uncertainty for exporters and importers as well as investors and bankers than an intelligently managed system of fluctuating rates. By alert response of the monetary authorities, erratic exchange-rate movements can be avoided under the latter system. The large and arbitrary jerks typical of the "adjustable peg" are avoided, at any rate, when exchange rates are not prevented from gradually following their long-run trends.

It was pointed out in the preceding chapter that the practice of pegging spot rates and letting forward rates fluctuate freely is perhaps the crowning inconsistency of the present system. We concluded that the spot rate of exchange is intrinsically the one of least importance for commercial trade, and that its constancy is therefore of least interest to exporters and importers. It could be argued that forward markets are, after all, also available under adjustably pegged rates, so that traders can, if they insist, hedge against exchange-rate variations just as well. It is an established fact, however, that the almost exclusive concentration of central-bank pegging operations on spot markets leaves forward markets, and especially those of longer maturities, relatively undernourished. For longer contracts, cover will therefore not always be available when needed. In addition, thinness of forward markets may demand heavy risk premia from traders at times when the continuity of (adjustably pegged) exchange rates is in doubt. The choice between spot and forward markets becomes a game of chance. After the revaluation of the D-Mark in March 1961, for example, forward markets in West Germany broke down completely for several weeks. All these defects of present forward markets are the direct consequences of the practice of pegging spot exchange rates.

b) Capital Movements under the "Adjustable Peg"

If the uncertainty created by the adjustable peg is a nuisance for commercial trade, it is all the more so for capital transfers. The markets for fixed-interest securities suffer vitally under the breach of confidence implied by the discontinuous adjustments foreseen in the IMF statutes. The willingness to undertake long-term investments in other countries, as far as they take forms for which the exchange risk

is a relevant consideration, can only depend on an expectation of long-run *stability*, not of temporary *rigidity* of exchange rates. It appears that this important point cannot be made often enough.

It is with respect to speculative short-term capital movements that the adjustable peg makes its poorest showing. The very fact that exchange rates are adjusted only at longer intervals implies that it is always perfectly clear to everybody which, if any, currencies may undergo a parity change, and in which direction. Speculators are thus offered a one-way guarantee against losses. It is totally unrealistic to assume that they will not avail themselves of it. Millions can be transferred between financial centers at a moment's notice and at very little cost. As long as such transfers are not prohibited by exchange controls, large flows of funds will be set in motion whenever the true value of a currency appears definitely out of line with its stated parity. It does not take a very pronounced over- or undervaluation to do that, as experience has shown. Only the stringent exchange controls which most countries have been applying until recently can explain why we have not yet witnessed a much larger number of crises provoked by foreign-exchange speculation since the end of the war.

Let me repeat once again that the effects of capital movements on income and employment are diametrically opposed, depending on whether exchange rates are pegged or freely fluctuating. *Only* when they move freely is it possible for the authorities to preserve reasonably full employment while adopting anti-inflationary monetary and fiscal policies. Depreciation in the wake of a capital outflow stimulates exports and can thus compensate for the cut in domestic spending. The degree of monetary restriction may be judiciously chosen so as to achieve exactly that mixture of employment and price-level stability the authorities are aiming for.

By pegging exchange rates, a government relinquishes its freedom of choice in employment policy. An outflow of capital *must* be met by restrictive monetary and fiscal policies when foreign-exchange reserves approach the vanishing point, no matter how high the rate of unemployment may rise. The only dubious alternative is to impose exchange controls, in other words, measures to strangle the free flow of trade and payments which it is the professed aim of most defenders of pegged rates to cultivate.

c) Alternatives for the Future Development of the Present System

A system such as the one laid down in the *Articles of Agreement* of the International Monetary Fund can develop in one of the following ways:

1. All countries guarantee perfect freedom of international payments

at all times and always adjust their domestic policies in such a way that no par values need ever be changed. This system is indistinguishable from the classical gold standard, except that the permissible margin for exchange-rate variations may differ from the one that used to be created by the gold-import and gold-export points. Apart from this minor difference of degree, the internal policies of all countries are just as effectively subjected to the rigid discipline enforced by events in the rest of the world as they were under the gold standard.

It is widely believed that the existence of emergency pools of foreign exchange such as the one administered by the International Monetary Fund (perhaps supplemented by similar regional funds and stand-by agreements between the major trading countries) constitutes a major improvement over the gold standard in that it mollifies the rigor of its discipline. If balance-of-payments difficulties could only arise from disequilibria in the *current* account, and if all countries could always be counted upon to apply the necessary corrective measures when they do arise, this optimism might be justified. Imbalances between exports and imports develop gradually and while they do, a country could both draw on the Fund and attempt to restore balance-of-payments equilibrium at the prevailing parities smoothly and without having to impose unduly severe restrictions on trade and payments. Even under these unrealistically favorable circumstances, it is highly doubtful whether reasonably full employment could be maintained over the long run in all participating countries.

The vicissitudes of the capital account will invariably spoil the idyll. Speculators respond swiftly to all indications of weakness. Though it may take years to exhaust a country's drawing rights with a moderate import surplus, months or even weeks may suffice if full convertibility also exists for capital movements. The additional leeway a country gains through its drawing rights on an international reserve fund, no matter how large, is bound to be rather inconsequential if the period of grace is merely extended by a few weeks or months. The availability of such drawing rights may do little else beyond encouraging some governments to postpone inescapable reforms a little longer, with the principal consequence that the ensuing maladjustments will be all the more serious.

It could be observed again and again, moreover, that the signals given by balance-of-payments deficits are not correctly interpreted even by responsible policymakers. Whenever a country's international reserves are declining at an uncomfortably fast pace, it is almost inevitably speculation and perhaps also "economically unjustified" long-term capital movements that are pointed out as the principal culprits. Those who conclude that too high a rate of inflation lies at the root of the

trouble are usually a minority. The educational value of pegged rates appears to be rather limited indeed.

2. Certain governments may take the right to change currency parities, incorporated in the *Articles of Agreement*, at face value and deduce from it that the Bretton Woods system differs from the gold standard in that it does *not* oblige member countries to pursue economic policies designed to preserve eternal stability of par values. One can certainly not blame them for this interpretation, for the *Articles* say nothing of the sort. As experience has shown, it does not take long before the fact becomes perfectly obvious to all the world that a country has been moving out of step. A persistent deficit on current account, however inconsequential in itself, soon becomes intensified by speculative capital flows. Disturbing capital movements are frequently thought to be associated primarily with freely fluctuating exchange rates. There cannot be the slightest doubt, however, that they must be a much greater nuisance under the "adjustable peg." Whenever the decreed par value overvalues a currency, the acquisition of foreign exchange is effectively subsidized and Gresham's law comes into its own. Under flexible rates, on the other hand, the depreciation of the currency would, at least to some extent, discourage the outflow of capital.

As the history of the various foreign-exchange crises has shown again and again, the controversy over whether a parity change is the counsel of wisdom or the height of folly invariably turns into a bitter dispute. Whether an upward or downward adjustment is envisaged, there are always powerful groups that tend to lose from it. The greater the possible parity change, the more vitally will certain interests be affected. The survival or doom of whole industries may be at stake; managed exchange rates therefore always become eminently "political" prices.

What is more, whole industries may *owe their very existence* to a condition of currency undervaluation that has been gradually built up over the years. From a human point of view, they cannot be blamed too much for struggling against their doom with every means at their disposal. This leads to the paradoxical result, only too well borne out by recent history, that the forces opposing an exchange-rate adjustment will be all the more powerful—their plight after its execution being all the more pitiful—the more urgently the adjustment is needed.

Exchange-rate maladjustment creates a situation in which open discussion of the advisability of parity changes by the responsible authorities is practically ruled out. It is entirely impossible for a central-bank president or minister of finance to give any hint of such a move before-

hand, and he will not infrequently find himself compelled to deny any intention of adjusting exchange rates all the more forcefully the more urgent the measure has become. The type of action to which public officials are thus forced is practically indistinguishable from deliberate fraud. There is hardly another international agreement that would entail consequences conflicting so clearly with the code of ethics of all civilized countries.

It is difficult to understand how the Bretton Woods agreement could have envisaged making exchange-rate adjustments "orderly" by having them decided by prolonged debate in a body of country representatives from all over the world, with all the inevitable publicity such deliberations create (Article IV). Apart from all psychological, social and political obstacles, there is no unambiguous criterion that would allow even disinterested scholars to determine when an adjustably pegged currency parity ought to be changed and when not. Even less is there a measuring rod that could reveal the "correct" magnitude of an adjustment. But even if all this *could* be established, the timing and extent of the change would inevitably remain the net resultant of the lobbying power of vested interests pulling in different directions, the strength or weakness and the personal convictions of public officials, considerations of political expediency, election strategy and a great many other factors that are not amenable to rational analysis or judgment. Hardly any other institution can compare with the adjustable peg in the degree of unnerving uncertainty it brings to international trade and finance and the extent to which it forces leading policymakers deliberately to deceive the public as well as each other. It is inconceivable how the impression could have persisted for so long that this system, of all things, was particularly well suited to guarantee an environment of certainty and predictability that would promote the highest possible level of international trade and investment.

3. It was implicitly assumed up to now that the systems we have described, international reserve standards with truly fixed, immutable exchange rates and the curious patchwork arrangement of the "adjustable peg," operated in a framework of full convertibility. This is an unrealistic assumption in most cases. Unless a government does not subject itself fully to gold-standard discipline, i.e., unless it is prepared to impose any degree of unemployment and stagnation in one case and to follow inflationary policies in another, the pegging of exchange rates will normally have to be accompanied by exchange controls. Capital movements, if not the evolution of exports and imports, will enforce this solution when a currency becomes overvalued unless and until it is devalued to the approximate equilibrium level.

This is probably the one objection that counts most of all from the point of view of the world at large. For many years following World War II, the greater part of the world has been subject to oppressive restrictions on the movement of goods and capital. By far their most frequent cause was currency overvaluation. Every single international economic agreement providing for greater ease of trade and payments that was concluded after the war contained escape clauses reserving the right of the contracting parties to reimpose restrictions in the event of balance-of-payments difficulties.

For years, many people were inclined to believe that balance-of-payments troubles were an inherent, incurable property of certain economies, not the natural result of currency overvaluation. The "dollar shortage" after World War II was widely attributed to "structural" disequilibria that were thought to be entirely independent of monetary factors, and which could consequently not be cured either through monetary restriction or through exchange-rate adjustment. Direct trade and payments controls were believed to be the only workable means of preventing the exhaustion of the international reserves of certain countries. Freedom of international payments, even for transactions on current account, was thought to be, at best, a feasible proposition for a world of "healthy" economies, but not for one in which the productive capacity of a large number of countries had been ravaged by war. This explains Article XIV of the *Articles of Agreement*, an escape clause that liberated members of the IMF from the stricter provisions of Article VIII for the duration of the postwar adjustment period. But even Article VIII only obliges member countries to maintain freedom for international payments relating to transactions on *current* account. Full convertibility for capital transfers is not required; on the contrary, the Fund is entitled to demand the imposition of exchange controls on capital movements, and to refuse assistance unless a member country in difficulties complies with this request (Article VI, Sec. 1). The spirit in which the Bretton Woods agreement was conceived is also well revealed in Article 33 of Keynes' "Proposals for an International Clearing Union" where he says that "it is widely held that control of capital movements, both inward and outward, should be a permanent feature of the post-war system. . . . It would, therefore, be of great advantage if the United States, as well as other members of the Clearing Union, would adopt machinery similar to that which the British Exchange Control has now gone a long way towards perfecting."¹

It is often believed that, however advisable free international trade

¹ "Proposals for an International Clearing Union," H. M. Stationery Office, Cmd. 6437 (1943); reprinted in Seymour E. Harris (ed.), *The New Economics*, New York: A. A. Knopf, 1947, p. 335-336.

and payments may be under "normal" conditions, the usual economic truths lose their relevance under circumstances such as those ruling in the postwar period when a substantial part of the productive plant of many countries was out of action. It is worth emphasizing that a country can, on the contrary, particularly ill afford to deprive itself of the benefits of more efficient resource allocation at a time when much of its productive equipment has been destroyed. Resources are even scarcer than at other times and their wastage through misallocation, whether it occurs as a consequence of insufficient participation in world trade or for any other reason, cannot fail to make itself felt all the more painfully. The liberation and the consequent increase in the volume of international trade that became possible as exchange-rate maladjustments were gradually eliminated was undoubtedly one of the major factors making possible the unprecedentedly rapid growth of the European economies during the 1950's. The progress that has been achieved since the end of World War II in promoting international trade and capital movements may, as is becoming increasingly evident, carry the seeds of its own destruction within it if countries adhere to the principle of pegging exchange rates. Freedom of capital movements may impose so great a strain on the international reserves of certain countries, even if their availability is increased under any one of the various proposals that are now being discussed, that they may be compelled either to reintroduce more severe trade and payments controls or to apply restrictive monetary and fiscal policies. World trade will be directly impaired if the former alternative is chosen; enforced stagnation under the latter eventuality cannot fail to lower the volume of trade flows as well, or at least to reduce their rate of expansion.

3. *Flexible Exchange Rates*

We have repeatedly had occasion to point out the salient differences in the behavior of an economy under the alternatives of pegged and flexible exchange rates. Our emphasis has not been, as it usually is, on the possibility of making a country's foreign accounts immune against the aberrations of national policies. We have, on the contrary, stressed the deliberate use of free foreign-exchange markets as an important tool for *strengthening* domestic policy.

It deserves to be repeated that the characteristic features of freely fluctuating rates would not, as is frequently believed, become illusory if their long-run stability were assured by the appropriate policies everywhere. Nobody has ever argued that a policy of fixing all interest rates at the levels of their long-run averages is equivalent to the customary practice of letting them fluctuate around these averages, yet

it appears exceedingly difficult to convince people that this conclusion is equally wrong when applied to exchange rates. It makes a profound difference whether or not a currency is allowed to depreciate or appreciate for a period of one or more years to a maximum of, say, 5 per cent before it regains its previous value. If it is rigidly pegged at this value all the time, the economy is bound to develop in a very different manner. In most cases, rigidity means that exchange rates will be maladjusted most of the time, *even though they may be the correct long-run equilibrium rates*. Given a natural tendency toward depreciation, restrictive policies under the compulsion to preserve par values may substantially lower employment, investment and the country's rate of growth. The losses thus caused cannot be undone by whatever means in a later period when the balance of payments may again develop favorably. At this later stage, other countries may in turn be the ones to suffer stagnation and balance-of-payments difficulties.

When the currency is allowed to depreciate, on the other hand, monetary contraction has the appropriate long-run effect: the unfavorable trend of exchange rates and the balance of payments is dampened or eventually reversed, without, however, reducing the level of business activity in the same degree as with fixed rates. Depreciation stimulates exports; this compensates partly or wholly for the depressive effect of restrictive policies on the domestic components of the gross national product.

There is a very important by-product of a regime of flexible rates if monetary policy is managed so as to assure a general expectation of long-run stability. Temporary depreciation will under these circumstances encourage an inflow of speculative capital. This means, among other things, that monetary restriction has to be less severe than if exchange rates were pegged. If a currency has depreciated, but is expected to appreciate, say, by approximately one per cent within three months, domestic interest rates can be up to *a full 4 per cent lower* than they would have to be with pegged rates to encourage the same volume of capital inflow. It need hardly be emphasized that this makes a radical difference for the relative burdens imposed by monetary restriction as well as for its effectiveness.

The fact that no international reserves are needed if the authorities do not intervene on the exchange markets is familiar. The much-discussed "shortage of international liquidity" is exclusively a result of the present practice of exchange-rate pegging through artificial intervention. This does *not* mean, to repeat a point made previously, that exchange rates have to fluctuate erratically when they are free to move. Determined and alert monetary policy, recommended here as a more attractive method of ensuring reasonable stability of exchange rates, brings

about that stability by provoking movements of private capital of the appropriate direction and intensity. These private capital flows will provide all the "international liquidity" that will ever be needed, no matter how much world demand for a country's exports is subject to changes over time.

It is sometimes said that the objectives of exchange-rate flexibility, combined with determined monetary policies to ensure their stability over the long run, would only justify wider spreads between the points of intervention. In a framework of strong monetary policies in all countries, exchange rates would not fluctuate very much in any case. The only legitimate reason for unbounded flexibility, it is then concluded, is the existence of sellers' inflation that pushes up prices irreversibly and faster in some countries than in others. Oldfashioned "demand inflation" could be contained in any case, given universal willingness and ability to safeguard price stability.

A general inflationary trend, whether caused by excess demand or cost push, is not necessarily the only reason for a movement of exchange rates. A structural change in the markets for specific commodities that loom large in the exports or imports of a certain country (changes in tastes or technology which cause a sharp drop in world demand, for example) may cause pressure on the foreign-exchange markets without any indication of general inflation. In the absence of the latter, restrictive monetary policies at pegged exchange rates may be too sudden and painful a cure. Whereas depreciation by a few per cent might assure the normal functioning of the exchange markets and of the economy in general, immobility of exchange rates under such circumstances will plunge the country into all the difficulties associated with currency overvaluation. Trouble of the opposite nature, i.e., a compulsion to engage in totally inappropriate inflationary policies, will result from a structural market change *favoring* a country's export products.

When the advisability of fluctuating rates in the case of sellers' inflation is conceded, but its legitimacy restricted to that case, it is easily overlooked that the diagnosis of sellers' inflation is, at best, only feasible *ex post*. At any given moment, it is usually impossible to tell whether a cost push is more powerful in one country than in another. A large variety of different factors affecting the exchanges will always be in operation, and it is humanly impossible to ascertain whether pressure on a currency is the result of overly casual monetary policies, of exploitation of monopoly power by certain groups, or of structural changes in technology or in world demand.

It is equally impossible to tell what the long-run average of exchange rates is going to be. One may wisely take a deterioration of the rating

of one's own currency as a signal for more monetary restriction, but it is unnecessarily painful not to let exchange rates run the course set by discretionary policies in conjunction with the vast assembly of autonomous forces that happen to be in operation at any time. Not the least of the vital functions of exchange-rate movements is the service they can render as a highly sensitive servomechanism that indicates the need for policy changes and simultaneously brings appropriate corrective forces into action in a framework of alert and intelligently managed monetary policies.

We have so far concentrated on the adjustment of exchange rates to random disturbances in different countries. The cumulative impact of such disturbances, however insignificant in themselves, may over a period of ten or twenty years already be quite considerable. Such long-run movements of exchange rates, hardly avoidable in a dynamic world, makes a mere widening of the margins of fluctuation an unappealing alternative. Maladjustments will be less frequent the wider these margins, to be sure, but they will not be any less difficult to cope with when they do occur.

A much more serious problem than the cumulative effect of random disturbances are one-way trends that result from differences between the rates of inflation in different countries. As soon as it becomes obvious to everybody that a currency can only *depreciate*, there will be no inducement for holding one's idle funds in that currency *unless* domestic rates of interest are higher than the expected annual rate of depreciation. If they are not and currencies are freely convertible, the outflow of funds thus induced leads to an anticipative deterioration of the currency on the exchange markets. This involves an artificial encouragement of exports and the consequent acceleration of inflation, a state of affairs that is most unlikely to be a workable arrangement. I want to reaffirm once again as strongly as possible that this is *not* the situation for which exchange-rate flexibility is here advocated as an effective remedy. It is most deplorable that such a state of affairs is so widely regarded as the only one that justifies the abandonment of exchange-rate pegging. While nobody ought to harbor any illusions on that count, let us also point out again that the likely unworkability of a regime of fluctuating rates under conditions of accelerating inflation is not a property peculiar to that system. Pegged rates will be even *more* vulnerable under these conditions. If the rate of inflation is considerably and unmistakably higher in one country than in another and currencies are freely convertible, the pegging of par values amounts to official subsidies to foreign-exchange speculators. A country's foreign-exchange reserves will be exhausted with remarkable speed; either pegging or convertibility will have to be given up before long.

The inducement to transfer funds abroad can, as noted earlier, always be neutralized by raising interest rates to a point that makes deposits denominated in home currency equally attractive. It follows that central banks are *always* in a position to prevent capital flight. If it occurs nevertheless, the reason must be (barring extraordinary political upheavals) that domestic interest rates are too low. By the same token, excessive fluctuations of exchange rates can only be caused by sleepy monetary policies. If central banks refrain from all intervention on the exchange markets, they have to take care to adopt considerably more flexible monetary policies to keep exchange rates reasonably stable. As long as they do, they do not have to worry about their stability. This objective can never be frustrated if the monetary authority is determined always to act with sufficient vigor. The heavy losses inflicted on “destabilizing” speculators in this case will soon persuade everybody that it is more profitable to work with rather than against the central bank.

There remains the argument that the pegging of exchange rates induces greater discipline in a country's monetary and fiscal policies. By removing the balance-of-payments barrier, it is held, flexibility of exchange rates could easily encourage weak or irresponsible governments to let things run too carelessly. This argument is not to be taken lightly. Two important innovations, however, reduce its force almost to insignificance as compared to what it may have been at the time of the old gold standard. Contrary to the code of governmental and monetary ethics during that era, both devaluation and exchange controls (at least for capital movements) are now generally accepted as means of last resort when a country faces growing balance-of-payments difficulties. Perfect freedom of international payments appears to me to be a considerably more reliable safeguard than rigidity of par values, for rapid deterioration of a country's currency on the exchange markets constitutes a more immediately and more widely noticeable warning signal than a fall in the country's exchange reserves.

Even for the era of the gold standard, Keynes had this to say: “It is claimed for gold that it keeps slovenly currency systems up to the mark. . . . So long as a country continues to adhere to the gold standard, there is force in this. But experience—an experience covering much ground and subject to scarcely any exceptions—shows that, when severe stress comes, the gold standard is usually suspended. There is little evidence to support the view that authorities who cannot be trusted to run a nationally managed standard, can be trusted to run an international gold standard. Indeed the presumption—there can be no evidence as yet of something which has never, so far, been tried—is rather to the contrary. For a nationally managed standard would not

subject the country's internal economy to such violent strains as those to which the attempt to continue to conform to an international standard may subject it; so that the inherent difficulty and the necessary sacrifice will be less in the former case than in the latter.”²

Before a country embarks upon an experiment with fluctuating rates, it is of the utmost importance that its government and its central bankers appreciate both the increased power of the tool in their hands and the need to use it more often and more unhesitatingly. Because of the greater and unaccustomed power and responsibility conferred on central banks by freely fluctuating exchanges, it would undoubtedly be unwise to introduce this system in too many countries at a time. For the same reason, one should probably not begin by having it adopted by underdeveloped countries without sufficiently trained economists in their governments and central banks. It is the policymakers of the advanced industrial nations to whose attention this booklet is primarily dedicated. To all appearances, there is no danger at this time that they might take overly rash action in line with its recommendations.

² J. M. Keynes, *A Treatise on Money*, London: Macmillan, 1930, vol. II, p. 299.

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